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CONTENTS NOVEMBER, 1940

Housing and National Defense ..... HENRY E. HOAGLAND 377
The Role of the Government in Defense Housing ..... ELIZABETH WOOD 382
I. The Outlook in Regulation ..... NELSON LEE SMITH 386
Progress in County Zoning: Marathon County, Wisconsin ..... J. M. ALBERS 393
Diversion of Freight Traffic from the Railroads ..... EDMUND J. PHILLIPS, JR. 403
The Location of Heirs and the Value of Their Inheritances: Farm and City Estates ..... E. D. TETREAU 416
II. Shall Going Value Be Included in the Rate-Base? ... IRSTON R. BARNES 430
The Rural Zoning Ordinance of Cook County ..... ARTHUR G. ERDMANN 438
A Review of Railroad Financing, 1920–1938: III. Funds for Capital Purposes ..... LORING C. FARWELL 443

DEPARTMENTS

Urban Land
A Backward Step in Zoning ..... ALFRED BETTMAN 455
Defense Housing and the Lanham Bill ..... HORACE RUSSELL 457
The Draft and Real Estate Transactions ..... DAVID A. BRIDEWELL 459
Off-Street Parking: A City Planning Problem ..... WALTER CURT BEHRENDT .. 464
Land Resources
Social Security: A New Consideration in Submarginal Land Policy ..... LEONARD A. SALTER, JR. 468
Policy for Use of State-Owned Land in Arkansas ... ORVILLE J. HALL 470
Public Utilities
An Incentive Plan of Rate Adjustment ..... MAURICE R. SCHARFF 475
Federal Regulation of Water Carriers ..... A. L. STEIN 478
Coordination of the Nebraska Public Power Districts ..... JACK KINTZI 481
Public Utility Financing in the Second and Third Quarters of 1940 ..... R. G. DUDLEY and W. H. EVANS 483
Bonneville Resale Rates Pay Out ..... BARCLAY J. SICKLER 487
Book Reviews 492
Index to Volume XVI 497

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VOLUME XVI NUMBER 4

Housing and National Defense*

By HENRY E. HOAGLAND†

FOR more than 150 years America has founded its national life upon a peace-time economy. Even during the periods when we have engaged in war we have thought in terms of a temporary diversion from our major objectives. As soon as the emergency passed we resumed our peace-time programs. The international events of recent months have shocked us into a realization of our unpreparedness to face the kind of a future that may be imposed upon us. What this future will be we cannot foresee at this time. It is becoming increasingly clear, however, that we may not be left free to continue a peace-time economy as the basis for our national life.

The demand for preparedness has become practically universal. All groups and all parties insist upon immediate filling of the gaps in our national defense. On matters of detail we differ widely. On objectives we are in general agreement. Appropriations by the billion are approved quickly, with little dissenting opinion from within the Congress or from without.

The implications of this haste in our preparedness program may have far-reaching results. On the one hand, if hysteria guides our actions, we may make serious mistakes that may be very difficult to correct when we recover our capacity to use our sober judgment. At the same time we face an even greater danger that many of us may not recognize until it is too late. In time of stress it is comparatively easy for interested parties to secure by indirection what could not be obtained directly under less emotional circumstances.

Preparedness of the sort that we shall probably engage in for a long period ahead is not just a matter of factory production. In general, we shall be called upon to reorganize our national life in such manner that preparedness against all of several future contingencies will be adequate. Productive capacity of our factories is one of the major bases of such a program. Others of equal importance must be taken into account. Among these is the housing of our people.

* For much of the information upon which this article is based the author is indebted to the Twentieth Century Fund and to its director of research in charge of its housing studies, Miles Colean. For a more extensive treatment of the subject it is recommended that the reader obtain from the Twentieth Century Fund a copy of its special report on housing and national defense. The Twentieth Century Fund is in no way responsible for the opinions expressed in this article.

† Professor of Business Finance, Ohio State University.

The Lessons of World War I

Some of our unfortunate experiences during World War I ought to be useful to us now in teaching us how to avoid the mistakes made at that time. In general, housing facilities were not considered a major factor in the allocation of war orders in 1917 and 1918. The concentration of contracts in a few localities attracted a flow of workers that overtaxed existing housing facilities. Rapid increases in building costs, inadequate financial resources available for the construction industry, and governmental restrictions upon the use and transportation of building materials resulted in the production of insufficient housing accommodations at the centers where they were needed most. Only when the consequent housing shortages began to produce serious inroads upon the workers' efficiency did the government at last see a relationship between housing and defense programs.

Lacking a definite housing policy and particularly failing to sense the nature of the relationship between housing and war orders, it is not surprising that the first efforts of various governmental agencies which interested themselves in the subject should be confusing and competitive. Some agencies, such as the Emergency Fleet Corporation, undertook the provision of housing facilities directly or in such manner that they assumed the financial risks involved. It is not surprising that in the end this Corporation suffered a loss of ⅔ of its investment in housing facilities.

The operations of the United States Housing Corporation were only slightly less wasteful. After the Bureau of Industrial Housing and Transportation—set up in February, 1918 to deal with industrial housing in its relation to war production—had tried unsuccessfully to stimulate private housing construction, it formed in July, 1918 the United States Housing Corporation. This Corporation purchased land—using its power of condemnation where necessary—planned residential communities, assisted in the installation of utilities, built houses, and managed them.

Because of the tardiness with which this Corporation started its operations, its first tenants did not move in until two months after the armistice was signed. After the war was over, Congress authorized the sale of all housing units built by this Corporation as well as those under construction. Their appraisal varied from ½ to ¾ of their cost. The amount recovered from their sale was much less than their appraisal, averaging only 40% of cost.

The Congressional committee which later investigated the United States Housing Corporation criticized its costly operations and its inefficiency. Apparently no recognition was given to an absence of governmental policy on housing in relation to war production. Nor was any mention made of the fact that this country had been engaged in the War for at least six months before the government discovered the vital relationship between the production of munitions of war and the housing of the workers engaged in this production.

During the World War I, congested areas of concentrated war orders suffered from lack of plant capacity, of men, and of adequate housing facilities. In other sections of the country there were idle plants, idle men, and vacant housing units. In the preparedness program upon which we are embarking it is to be hoped that greater care will be exercised in the selection of locations where defense activity will be carried on. In making these selections housing should be considered before decisions are made and not after contracts have been let.

The Long-Range View

Since all evidence points to a long-time preparedness program, housing should not be considered from the point of view of a temporary herding of factory workers into just any kind of barracks. We should interfere as little as possible with normal family life. This means minimizing the migration of workers. To accomplish this will necessitate a careful study of existing housing accommodations as a factor in the allocation of orders for defense purposes. There is no intention to suggest a hit-or-miss scattering of orders. Rather it is essential to utilize the productive capacity of the community, including housing facilities, but not neglecting other important considerations such as those involved in military strategy.

Although our preparedness program will probably be spread over a considerable period of time, it is essential that we make our plans for an even longer period ahead. In addition to avoiding temporary congestion of population so far as possible, we should undertake to relieve ourselves of those major dislocations of population groups resulting from a cessation of an accelerated production program. If we can avoid present congestion we will have less to fear from future dislocation.

By following a policy of selectivity in the placing of orders for preparedness purposes the government will take a long step toward the solution of other vexing housing problems which were common during the period of World War I. For example, the congestion of population at centers of great concentration of war orders resulted in sharp increases in residential rentals. In some instances governmental agencies took action in the form of legislative control over rent increases. If the abnormal congestion can be avoided, such arbitrary measures will not be so greatly needed.

Although no one doubts the capacity of America to prepare an adequate defense against all invaders—given reasonable time for this purpose—few of us realize the probable eventual cost of such a program. Since it will undoubtedly be many times what has already been provided, it will be desirable for us to conserve existing resources of all kinds, including housing facilities. This will not only minimize loss and waste but it will result in the all important benefit of time saving when time may be the essence of success.

By making the most effective use of existing resources we can avoid an increase in the burden upon those agencies of the government engaged in housing and in the financing of housing facilities. At a time when governmental leaders need all their time and talents to devote to the new problems which the emergency of preparedness has placed upon them, we should utilize existing resources to the fullest extent. Housing is no exception to this rule.

In what has been said above there is no intent to suggest that no new residential construction will be needed during the period of preparedness. On the contrary, it is expected that, if a policy of selectivity in the placing of defense orders is followed, construction will proceed in a normal manner under the usual auspices and by the use of commonly accepted methods of control and finance. With ample credit available there appears to be little reason to anticipate an abandonment of the field of residential construction by private agencies unless the risks become too great as a result of congestion in what appear to be preparedness-boom areas. In the absence of any such fear a very large part of residential construction can be provided by private

agencies with no more governmental assistance than has been available for the past several years.

Meantime the new residential construction needed for defense purposes can be speeded up considerably by the introduction of various economies that have long been overdue in the construction industry. It is well recognized that many of our building codes have been written in terms of the larger, more expensive houses. Modifications can and should be made for the smaller houses. These can be effected without sacrificing the health or safety of the occupants. In the requirements for materials, economies can be effected that will result in lower costs and more rapid completion of the housing units.

In like manner it is possible to make more effective use of the skilled labor customarily employed in the building industry. If we would but use the methods already known but too infrequently utilized we could reduce the cost of construction materially. In addition, with the cooperation of all concerned, we could undoubtedly reduce existing costs still further without unduly cheapening the product. It is to be hoped that, at least in the interest of the defense program, the cost of small house construction will be kept at a minimum and that means of accelerating the construction of such houses will be generally applied.

If it should become necessary to ration materials and labor needed for residential construction, perhaps materials can be used that are not so essential to the production of munitions of war. To meet a possible shortage in building labor, technological improvements should be introduced where possible to assist in improving the efficiency of labor. In any event two considerations should be kept in mind. In the first place, housing is an essential part of any defense program. Unless it is provided, other elements of the entire program will suffer. In the second place, if a program of selectivity in the allocation of contracts is properly followed, there will be less need for new construction than if existing housing accommodations are ignored, with the consequent emphasis upon need for new facilities to house a congested population.

In the field of rental housing, considerable encouragement would result from a clearing of the atmosphere of the existing confusion concerning the part the Federal Government may play in the direct provision of housing facilities for workers in defense operations. It seems highly desirable for the government to formulate its policy and to announce its conclusions for the guidance of those interested in the subject. If private industry knew the circumstances under which it may expect to find the government engaged in housing operations, it could be guided accordingly. Prospective tenants also should know to what extent, if any, they may hope to share in the benefits of subsidized housing.

Who Shall Provide the Housing?

In general, the housing program for defense activities will probably be cared for more adequately by private enterprise if the government will confine its attention to assistance to private enterprise. Much can be done by the government in pointing out the character of the need for new housing facilities and the places in which the need will be felt. The assembly and organization of the information upon which such decisions must be based can be better taken care of by the government than by any private agency. If the government will place upon private enterprise the responsibility for providing housing facilities for defense purposes, it is believed that both private equity capital and private mort-

gage capital will respond heartily.

At the same time it is recognized that under some sets of circumstances governmental agencies may have to do more than stimulate and guide private construction. For example, where a concentration of defense preparations results in what is evidently a temporary congestion of population, it is conceivable that probable future instability of values may discourage private capital from assuming the risks involved. In such cases, unless the government does more than is required under more stable conditions, an inadequate supply of housing accommodations will result.

To offset such a contingency any one of several plans may be followed. If the absence of mortgage finance is the limiting factor, needed funds may be advanced by some governmental agency, such as the RFC Mortgage Company. With an abundance of private mortgage funds present and in prospect it is evident that government lending for housing purposes can be limited to those areas where the risks are greater than the trustees of private funds should assume.

Finally, a few situations will call for the provision of housing facilities directly by the government. For example, in some defense work there will be a temporary demand for a large number of workers without families. A similar situation will obtain where there is a concentration of men in training for military service. Under such conditions it is obvious that the governmental agency most concerned should provide the kind of housing facilities best suited to the needs of those to be housed. Indeed housing facilities are simply a part of the project to be provided by the government to meet the requirements of an adequate preparedness program. Housing is inseparable from the other parts of the project. When the need for the particular preparedness program passes, the need for this kind of housing will expire at the same time.

In like manner, in spite of our best efforts to select locations for defense activity in terms of existing housing and other resources, some defense operations will necessarily be located where there will be slight prospect of continuance under peace-time conditions. Here again housing must be considered an integral part of the defense program. It will probably be financed in the same manner as the defense operation itself. With the passing of the need for the defense program the investment in the plant as well as in the housing facilities will become obsolete. Both should be amortized in the same manner. The provision of such housing facilities is not a proper basis for investment of the usual mortgage or equity funds.

The reader will note that in the above analysis no place has been provided for the operations of the United States Housing Authority. This omission has been deliberate. This agency originated from the demand that families with insufficient incomes to provide adequate housing for themselves be assisted with a government subsidy. It is to be hoped that, until we acquire more experience with subsidized housing, we shall not move too rapidly in the direction of discouraging people whose incomes are in the levels just above those who are the beneficiaries of government largesse in the form of new housing accommodations. At any rate there appears to be no valid reason why subsidized housing should be provided on a broad front under the guise of meeting the needs of a preparedness program. As already indicated, the belief of the present writer is that more satisfactory results can be produced by private enterprise and at less ultimate cost.

The Role of the Government in Defense Housing

By ELIZABETH WOOD*

THE expansion of industry arising out of the defense emergency has resulted in many acute problems of housing. Recent federal legislation has been based on the fact that in many communities housing is a part of the defense program, because the expansion or construction of factories will wait upon the production of housing for workers. But particularly significant in the legislation and in the procedures followed by the National Defense Council is the attitude that the design, location, and construction of all defense housing should, wherever possible, be soundly planned to be useful after the period of the emergency; it should be adapted, if possible, into the broad housing need and into the local city plan. In order that this may be done, there has been recognition of the role that a local authority can play in the planning and ownership of defense housing. The United States Housing Authority has also been given certain responsibilities in the distribution of funds.

It is the reference to the local authorities and the United States Housing Authority in federal legislation that has been responsible for repeated assertions that "private enterprise can do the job" of providing defense housing. One would presume that private enterprise so expresses itself because it believes that government in housing will rob it of profits. Surely, if private enterprise did not regard defense housing as a source of legitimate profit, it would not be concerned over the usurpation of the market by governmental agencies. This assumption merits a little attention.

Private enterprise obtains profit from the production and operation of housing as promoter or seller of land, as financing agent, and as owner or manager. The most expressive group advocating that "private enterprise can do the job" is the real estate group which gets its profit from any one, or any combination of two or more, of these functions.

Private enterprise's profit as contractor exists, regardless of whether the army, the navy, USHA, or a local authority develops the housing. Construction by all these governmental agencies is carried on by contractors, as a normal construction job.

Whether a local authority, the army, or navy buys land, the seller (private enterprise) gets its profit. There is no seizure of land without due process of law by any of these governmental agencies. The local authority in the process of acquiring and developing a housing project employs many elements of private enterprise—i.e., appraisers, negotiators, lawyers, etc.

Both government and private enterprise must analyze the possibility of profit in the third and fourth classifications before concluding categorically that either government or private enterprise "can do the job."

The Problem in Small Communities

The most acute defense housing needs arise in smaller communities where shipyards, or munitions plants are suddenly expanded, or new plants built; where vacancies can be counted on the thumbs and new workers by hundreds or thousands.

In such communities it is not possible to talk of "integrating new housing into the city plan or housing plan of the community." In such towns this increase in

* Executive Secretary, Chicago Housing Authority.

population will be only for the duration of the emergency. The plants can be expected to reduce output drastically or to shut down after the emergency, and since there are few if any other industries in the area, the new population will not be absorbed into the community. It will go on relief or move to another town.

No one can estimate at this time whether the emergency will endure for one, three, or five years. It is, therefore, impossible to guage the risk of a mortgage lender, or to work out a construction cost, or a period of amortization that is in gear with an estimate of the wages of the new group, and with the estimated period of their employment in that community. In such cases, some of the cost must be regarded as an outright defense expenditure; for there will inevitably be some write-off at the end of the emergency.

Even though the housing might be barracks that could be paid off in a few years out of rent income, the privilege of being its owner, or its financing agent, is a dubious one; and no one will deny that the privilege of paying for the inevitable write-off must be the government's.

The Problem in Larger Communities

In other communities, it is possible to regard the defense housing program as a part of the permanent housing program for a community, and in these communities the approach is different. Although the influx of population may be large, there are a number of sources of employment other than that of the war industry. Consequently a reasonably sound basis exists for the assumption that the new population will be absorbed, particularly since the trend in the location of new industrial plants is toward medium or small communities rather than toward the big cities.

But this eventuality may be far distant and if the period of the emergency is brief, it may very well be that here too the new population will become either a relief population during a period of adjustment, or will have to move to other communities. Defense housing here also represents something of a gamble. In towns like this a housing shortage has existed for the past 10 years, but I can cite town after town where the concentrated and intelligent efforts of savings and loan leagues, chambers of commerce, civic-minded leaders, and the building industry have been unable to increase the number of units because the market for housing that can pay a profit has been supplied. All the comfortably salaried families own their homes. The families crowded in old shacks by the railroad tracks have continued to represent a tantalizing but unapproachable market for private enterprise, because the income of these families is not sufficient to pay profit to the builder, the financing agent, the promoter, or land developer.

The wages of such people will certainly go up during the emergency and the incoming population will also have a reasonable living wage, but they still do not represent a good risk for any lending agent for the purchase of a home with a 20- or 25-year amortization period. Nor do they represent a market for the owner and operator of an apartment building who also needs 20 or 25 years to pay off his mortgage.

Realtors who are quickly in and quickly out of the production of housing may eye this group with avidity, but I have not yet heard mortgage bankers join in their wish to serve these people. These marginally employed families may have a good purchasing power *at this time*, but they do not represent a good risk.

The defense housing program of the United States Housing Authority repre-

sents another method of assigning a risk to a governmental agency. The program followed, for example, in Rock Island, Illinois, is as follows: The buildings are constructed and owned by the local authority; all money for the project is loaned by the USHA, without subsidy; for the period of the emergency, the buildings are rented at a level which meets the wages of the emergency population; the buildings pay a 10% service charge (buildings are tax exempt) against an average 2% service charge on subsidized authority projects. It is understood between the USHA and the local authority that the rents and income levels will prevail during the period of the emergency; but it is expected that rents will be reduced, and *a subsidy applied to the buildings when the emergency is over*, in order that the buildings may house "the lowest income group"—the group that private enterprise has never been able to serve adequately. Inasmuch as there will always be poor families in most communities, the need for subsidized housing may well continue for a good many years (all political promise to the contrary notwithstanding).

It should be noted that all subsidy or annual contribution contracts between local housing authorities and the United States Housing Authority call for periodic readjustment in order that the amount of the subsidy may be decreased, when and if true wages rise.

This method of handling an emergency housing situation embodies the minimum of write-off. The local authority performs a function that cannot be performed by private enterprise. It rents buildings to a group that does not represent a good risk for private owners or financing agencies, and at the end of the emergency it returns the buildings for the use of a group that has never represented a market for private capital.

Perhaps it would not be wise to suggest the administrative difficulties that confront a local authority under such a program, but frankness demands it. Under this type of program the local authority is under a moral obligation to be ruthless in its determination to serve only a group that private enterprise cannot serve, no matter at what cost of popularity. Changing rent levels and income requirements means changing tenants, which is always the ultimate in headaches, as many a local authority knows. It also means that the local authority must carry on a job of market analysis unprecedented in private enterprise. It must at all times justify its rent levels with a volume of data on incomes and rents, which few, if any, communities have—and fewer are skilled in using.

The Problem in Metropolitan Cities

The housing problem in very large cities—Chicago and Detroit, for instance—represents another group of factors which need attention. So far all defense monies have gone to such smaller communities as have been described above. Unless new arguments are introduced into the situation, it is highly probable that no defense housing as such will be produced by any agency in the larger cities. A generally recognized defense policy is that it is undesirable to add new industries important to armament to large centers of population, particularly to those centers which are near the border and accessible to invasion. On the other hand, it is assured that all factories in these cities whose output can be utilized for defense purposes will be expanded to the limit. The significances of this fact are these.

The migration from country or small towns to cities will not assume the proportions that it did during the last war. There may very well be a notable migra-

tion of skilled workers to the small towns where the new factories are being located. The increased work will be taken up by unemployed, or partially employed. The net effect of this will be an improvement in wage levels in the city, and an increase in gross wages for the city.

In the last war, the increased wages did not result in a large residential construction program, though the pressure for additional and better housing was even greater than may be expected in this emergency, because there was a heavy influx of families from the small towns into the big cities. Residential construction was at a standstill because all materials and labor were routed to the production of defense materials, in the strict sense of the word. So the housing shortage became intensified, substandard houses were exploited, and rents skyrocketed, until many big cities were forced to impose rent restrictions. Enforcement of rent restrictions is not a constructive or desirable governmental role. The question—What is the alternative?—should concern private enterprise.

Some Basic Considerations

The answer is not simple. But these principles seem to be obvious:

(1) The production of housing throughout the emergency period in sufficient volume and of such kind as will prevent an intensified shortage and maintain the trend of improving housing conditions and standards for low and medium income groups is necessary.

(2) This result will be assured only if the public generally (and government as well) recognizes that this is a defense measure, in the large sense, as well as in the narrow sense. It is a platitude that the strongest defense a country can have is the loyalty of its citizens to its homes —and loyalty to slums, rooming houses, and exorbitant rents is not to be expected. This recognition must be more than a platitude or a sentiment; it must be expressed in the regulations or procedures that governmental agencies follow in the exercise of their functions.

(3) Private enterprise can take the responsibility for production of this housing, only if the costs of construction do not rise out of proportion to the purchasing power of the public. Inflation of costs will kill the market in favor of the present owners of property.

If these principles are recognized, the demand of private enterprise to "do the job" will be called. Without such recognition there won't be a job for anyone to do.

The Outlook in Regulation

By NELSON LEE SMITH*

THE great national defense effort upon which this country is engaged unquestionably will entail sweeping changes in the emphasis, if not in the direction, of American life. What these changes will entail can only be conjectured; what their ultimate outcome will be no one can know. But it is safe to say that no such drastic modification of our economic life can occur without involving far-reaching consequences upon the public utilities which, are so inextricably interwoven with it—and necessarily, therefore, upon the objectives and processes of their regulation in the public interest.

Regulation under Normal Conditions

Proceeding, first, under the assumption that we may escape direct military engulfment in the present world-wide maelstrom and that national defense activities may not involve such diversion from normal courses as to cause a sharp break with traditional objectives, the major purpose of utility regulation will continue to be the securing of adequate service to the public without undue discrimination and at just and reasonable rates. These are the age-old standards which have governed the conduct of the public callings since the early days of the common law. Although more recent methods of regulation through administrative commissions have given somewhat more specific meanings to those familiar, though rather vague, terms, for the most part our modern innovations have been designed principally to provide more effective means of enforcing the old obligations and of attaining the old objectives. Sometimes these expedients have been well-devised and successful; occasionally they have seemed to obstruct, rather than to facilitate, progress in that direction.

Service. It is in the field of utility service that the ingenious inventions of both management and regulatory bodies have resulted in the most satisfactory gains. Technological advance has been rapid and substantial. Increased operating efficiency has brought lower costs, and therefore a larger volume of service per unit of customer expenditure. Improvements have raised the quality of all types of utility service—transport is swifter, safer, and more comfortable than ever before; communications are more satisfactory and reliable; gas is richer, freer of odor, and held at better pressures for use in more attractive and efficient appliances; electric service and equipment have been improved similarly, while voltage variations, frequency of interruptions, and duration of outages have been greatly reduced; and water supply, likewise, has undergone betterments in respect to such matters as odor, filtration, and pressure.

Regulatory agencies have been alert to these developments, which in some instances they have fostered. Commissions have endeavored, through a progressive raising of service standards, to insure the enjoyment of progressive benefits by as large a segment of the public as possible. It is to be expected that these efforts will continue, but in general along lines and through procedures already well established, with

* Chairman, Public Service Commission of New Hampshire. This article is substantially a condensation of an address delivered on October 18, 1940 at Atlantic City, N. J. before the Pennsylvania Water Works Association.

only such modifications as may be brought about by changes in the arts—as, for example, the present increased attention being given to power factor in the case of electric systems contending with heavy loads of fluorescent lighting.

Closely related to their interest in technical improvements leading to service of higher quality is the concern of the commissions with an adequate quantity of service. On the whole they have been as interested as the utilities in assurances of adequate sources of supply and in the possibilities of promotional rate and sales programs intended to enlarge the various markets for different types of service. They have been active in efforts to reduce construction costs, and thus to enable services to be extended on a reasonable basis as widely as possible. By and large, they have attempted to hold in check wasteful competitive practices and unwarranted duplication of facilities. There is no reason for expecting a diminution of activities of this character.

In the last few years there has been a widespread and growing tendency on the part of state commissions to insist that utilities incorporate in their filed tariffs and rules specifications of the terms upon which extensions would be made and more definite commitments as to precisely the extent and character of the service undertaken to be rendered. This is perhaps the most noteworthy recent development in the control of service. Although companies have sometimes chafed under the somewhat more rigid requirements thus provided and although they have of course protested against the imposition of terms deemed unreasonable, still it is coming to be recognized generally that the avoidance of ambiguity in such matters reduces the area of possible misunderstanding, disagreement, and complaint, and thus is in the interest of all concerned.

In short, it may be said that the regulation of service is likely to continue in the form of somewhat more intensive activity in specific fields, but in the main along the major lines of policy which have been followed in the past with a very considerable degree of success.

Rates. Unfortunately rate regulation as we have known it cannot be characterized as successful without some very important reservations. It is true that over the years the rates charged for most utility services have declined markedly and that, generally speaking, fair and adequate returns have been earned by the companies, but these things of themselves are inconclusive as to the real effectiveness of regulation. To what extent would the reductions of charges have been made voluntarily in an endeavor to build business? Have the procedures which have been followed in lowering rates been wasteful? Have the cuts in rates followed the downward course of unit costs as fast or as far as should have been the case? Have costs themselves fallen as rapidly as they should have in view of technical progress and as fast as they would have under some other scheme of rate control?

These questions are exceedingly pertinent in any attempt to evaluate the success of regulation, and little comfort can be drawn from the answers which must be given. It is to the weaknesses of the regulatory process as thus disclosed that commissions must turn their attention if a satisfactory future can be anticipated with confidence.

Several years ago Mr. Justice Black referred to the famous Indianapolis Water case as "an illustration of the almost insuperable obstacles of rate regulation today," pointing out that it had "already consumed more than six years

and [was] destined to remain suspended for six more years."[1] Mr. Justice Brandeis shortly before his retirement spoke of the usual rate proceeding, with its estimates of hypothetical reproduction costs and observed depreciation, as "involving hearings and law suits so protracted as to frustrate rate-regulation."[2] More recently Mr. Justice Frankfurter made an effective plea for rate adjustments brought about through the application of knowledge of economics and finance, rather than obstructed by "legal education and lawyers' learning."[3]

Other expressions of discontent with present rate-making procedures on the part of expert critics, the judiciary, and the general public are not hard to find, nor does one have to search far afield for striking illustrations of their time-consuming and wasteful character or of the ill-will and recrimination which they are capable of generating.[4] Ever since 1917 the New Hampshire Commission has been engaged intermittently in controversy concerning the rates of a water company serving a resort community whose residents during most of that time have viewed every act of the utility with skepticism, if not downright suspicion. Various makeshift arrangements and repeated attempts to adjust the differences of opinion through negotiations having failed, the commission of its own motion ordered a formal rate investigation in March, 1939 and, after prolonged hearings and the usual engineering appraisals and accounting studies, issued its order fixing new rates in June, 1940. During the course of this relatively minor proceeding the company spent in the neighborhood of $20,000 on rate-case expense. After voluntary reductions made during the hearings, the commission's final order called for an additional rate cut in gross revenue of only about $5,500 on the basis of past consumption, with clear indications that anticipated growth of business would result in recovery of at least a portion of the net. Nevertheless the company elected to file an appeal to the state supreme court. How much this will finally cost or when the matter will be definitely disposed of no one knows.

This instance is not cited in criticism of a company which may be fighting for principles and legal rights which it regards of fundamental importance, nor is it intended to suggest that the commission was either entirely right or utterly stupid in dealing with the case as it did. It is referred to simply to illustrate the apparent wastefulness, from the standpoint of the general public, of the expenditure on litigation of an amount many times greater than the sum at issue, and also the fact that during all this long period of uncertainty neither the position of the investor nor the public relations of the utility are likely to undergo any improvement.

Some states, such as Illinois, New York, Pennsylvania, Wisconsin, and Virginia, have sought to ameliorate this condition by enacting statutes permitting their commissions to fix rates temporarily within certain stipulated limits as to rate-base and rate of return and with provisions for recoupment[5] if the rates so established are found subsequently to have been too low. Unquestionably these temporary rate statutes are useful in re-

[1] *McCart v. Indianapolis Water Co.*, 302 U. S. 419, 435 (1938).

[2] *St. Joseph Stockyards Co. v. U. S., et al.*, 298 U. S. 38, 88 (1936).

[3] *Driscoll v. Edison Co.*, 307 U. S. 104, 122 (1939).

[4] E.g., W. E. Mosher, "Defects of State Regulation of Public Utilities in the United States," 201 *Annals of the American Academy of Political and Social Science* 107 (January, 1939); B. W. Lewis, "The Government as Competitor," 29 *American Economic Review* 293 (June, 1939); J. H. Murdoch, Jr., "Operating Efficiency and Rates," an address before the New Jersey Utilities Association, November 18, 1939.

[5] Except in Wisconsin.

ducing the delays and resultant public irritation now too frequently encountered in rate proceedings. Therefore, their more general adoption by an increasing number of states is to be expected. They fail, however, to correct completely all present weaknesses.

Even under statutes conferring authority to prescribe temporary rates, extensive litigation is possible, not only as to the constitutionality of the laws and the propriety of the temporary rates themselves, but also, and more importantly, concerning the reasonableness of the continuing rate level as ultimately determined, with all that this implies as to costly and often meaningless appraisals of value according to the various familiar and conflicting methods. Furthermore there is nothing inherent in the temporary rate procedure to preclude the needless recurrence of such controversies. An even more important shortcoming is the fact that this method of rate-making affords no solution to the question whether the unit costs of utility service are falling as rapidly as general conditions and technological advance would permit. In other words, it offers no cure for a fundamental weakness of present methods of rate regulation—the lack of incentive.

It is axiomatic that the current legal philosophy of rate control, as expressed in *Smyth* v. *Ames*[6] and since repeatedly affirmed, holds out to a utility merely the opportunity to earn a fair return, and that only if its management is reasonably honest and economical. In the relation of responsibility between management and the owners of the property there is of course a considerable assurance of reasonable efficiency, yet in many well known instances this has not sufficed. Some incentive is provided also by the almost inevitable lag between the collection of earnings in excess of a fair return and corrective action by the regulatory agency, but it is this very time interval which the commissions are bending every effort to reduce. And if every cent of saving effected by operating economies were to be converted immediately into rate reductions it is questionable how long the urge to economize would remain. The ineffectiveness of vague references to an allowance, indefinite in amount, for managerial efficiency in determining the fair rate of return has been commented upon at length elsewhere by the writer.[7] Certainly it is unrealistic for commissions to suppose that, through the use of their usual procedures and without undertaking to manage the property, they can regulate operations in such detail as to require conformity to specific standards of efficiency and cost. The answer must lie in some other direction.

Not long ago the New Hampshire Commission had occasion to consider this problem in connection with a formal electric rate case which it had initiated. The investigation had already consumed nearly a year, during which time the company had reduced its rates by about half the amount asked for by the commission and had incurred rate-case expenses of nearly $70,000, or almost as much as the reduction originally sought. The usual appraisals were being made, the testimony was dragging along, feeling ran high, and there was no telling when or at what cost the case might ultimately be disposed of. Finally, a conference was suggested to see whether the agony could be ended by negotiation. The outcome was a settlement which, although formally presented on the record by the company and incorporated in the report and order of the commission, actually was a joint product for which the

[6] 169 U. S. 466 (1898).

[7] *The Fair Rate of Return in Public Utility Regulation* (Boston: Houghton Mifflin Co., 1932), particularly pp. 70–74 and 193–200.

credit or blame must be shared equally. Since this settlement is the subject of another article in this publication it is unnecessary to describe it in detail here.[8]

The company was anxious to terminate the proceeding and to end the drain of payments to lawyers, engineers, and other experts. It was willing to make further rate concessions but wished some protection in the future against unavoidable increases of costs and some protection against unwarranted additional demands in the absence of specific findings as to the rate-base and rate of return. The commission was equally anxious to end the unproductive outlays and to make effective the savings to the public which would result from further rate reductions. It felt that there were unrealized opportunities to effect economies of operation which, however, it was in no position to demonstrate or compel. It sought a means of assuring that if substantial savings were made the public would share in them through properly reduced rates without a repetition of such protracted and wasteful proceedings. Under these circumstances it is not surprising that both sides fixed upon a sliding-scale arrangement as the best solution.

There is of course nothing new about the sliding scale as such.[9] In view of its apparent success in Britain, it is to be wondered that it found so little acceptance in the United States. Adaptations were the so-called service-at-cost franchises used to some extent, chiefly for transit operations, during and just after the first World War, notably in Indiana,[10] Massachusetts, and Ohio, as well as in a few other scattered instances. The principal objection to most of these arrangements was their complexity and the attempt to deal specifically with a great variety of particular situations in terms of current price conditions. For example, the proposed 1925 contract between the City and the Milwaukee Electric Railway and Light Company covers 43 closely printed pages of ordinary textbook size.[11]

The best known of the American sliding-scale agreements are those effective in the City of Washington since 1924 with the Potomac Electric Power Company and since 1935 with the Washington Gas Light Company. Both of these plans provide for a basic rate of return upon an initial valuation and stipulate that a rising percentage of earnings in excess of the standard shall be used for rate reductions.[12] Although substantial reductions of rates have been made under these schemes—in the case of electricity amounting to a total of over $8,500,000 during the 16-year period 1924 to 1939 and involving almost phenomenal increases of usage[13]—they involve fairly complex adjustments for changes in the rate-base and in the accrual of depreciation which should be avoided if possible so that the adjustment of rates may be as simple, direct, and understandable by the ratepayer as they can be made.

Such novelty as is possessed by the plan of settlement adopted in the New Hampshire case lies in its extreme simplicity. Other, and perhaps better, means of achieving the desired result are under

[8] See Maurice R. Scharff, "An Incentive Plan of Rate Adjustment," pp. 475–8 below.

[9] See M. G. Glaeser, *Outlines of Public Utility Economics* (New York: Macmillan Co., 1927), pp. 299–309 and Ch. XXXII.

[10] E.g., *Re Hydro Electric Light & Power Co.*, P.U.R. 1918 A 325.

[11] Glaeser, *op. cit.*, Appendix A.

[12] See C. E. Troxel, "Will the Washington Plan Work with Gas Utilities?" 25 *Public Utilities Fortnightly* 660 (May 23, 1940).

[13] M. M. Patrick, "How the Sliding-Scale Basis of Rate Making Works," 11 *Public Utilities Fortnightly* 506 (April 27, 1933); R. E. Elgen, "Profit Sharing, the Key to Regulatory Success," 25 *Public Utilities Fortnightly* 787 (June 20, 1940).

consideration in various quarters. It is to be hoped that they will be tried and that through further experimentation a satisfactory solution will be found. For it seems that real success in rate control cannot be assured unless, through new methods of approach, a way is found to reduce the needless delays and wasteful costs of present-day litigation and to provide, under regulation, that spur to increased efficiency which in other types of enterprise is provided by competition.

Ancillary Activities. Space does not permit more than passing mention of a few outstanding current activities of regulatory agencies which, although in a sense subordinate and supplementary to their control of service and rates, are nevertheless of great importance and are likely to become increasingly prominent in the future.

Accounting procedures are basic to the disclosure of accurate information essential to any intelligent regulatory effort. Within the past five years the accounting classifications prescribed for all major types of utilities have undergone thorough revision. Efforts are now being directed to the clarification and interpretation of these new systems. Many of them provide for or indirectly necessitate the analysis of fixed capital, study of historical costs, and maintenance of continuing property records. In some quarters these requirements have been viewed with alarm, either because of fear of the expense entailed or concern lest unwarranted write-offs of differences between original and present book costs be ordered without regard to consequences for the credit of the utility.

Although these fears may not be baseless in all cases, time and experience are likely to produce reassuring developments. Surely no attempt to force elimination from the books of account of sums actually invested in good faith during the course of arm's-length transactions can ultimately be successful. In New Hampshire the electric utilities established continuing property records under order of the commission five years ago, the gas companies are completing theirs, and the work with the water companies is just getting well under way. The utilities affected have generally come to believe that the effort and cost of setting up and operating these records are amply justified from the managerial standpoint alone.

Closely related to these accounting procedures, which frequently involve some engineering analysis as well, is another development which calls for even closer cooperation between accountants and engineers. This is the study of depreciation which certain commissions, among them that of New Hampshire, are now requiring. This renewed interest in the facts of depreciation has resulted in an attempt by a committee of the National Association of Railroad and Utilities Commissioners to shed further light on this perennially troublesome matter, an effort in which able representatives of the electric, gas, telephone, and water supply industries are cooperating.

Here again there has been some distrust of the purposes and probable results. It should not be assumed that these studies have as their objective the arbitrary prescription of either specific methods or rates of accrual. Rather, they are intended to disclose which methods of analysis—for example, whether unit or group—have been proved by actual experience to be best suited to the several major types of property, to shed light upon the various means of dealing with mortality facts, and to examine the consequences of different accrual methods. Surely, if there are no skeletons in the closet, there should be nothing terrifying about an attempt to

open the door for inspection. In any event, it is almost certain that there will be much more of such fact-finding explorations in the future. At the same time, however, it is not to be expected that responsible commissions will seek rapid adjustments of inadequate reserves on the basis of what such studies may show without adequate consideration of the effects of their action upon surplus, earnings, and rate and revenue requirements. On the other hand, in rate and related proceedings studies of physical property shedding light upon the actual occurrence of depreciation unquestionably will be useful, to commissions and utilities alike, both in determining annual charges and accruals and in connection with deductions from the property base on this account.

Finally, in this connection, the wave of refinancing brought about since 1935 in response to unusually favorable bond markets has led to much more attention on the part of regulatory authorities, both state and federal, to the prices and terms of proposed issues and the costs of their flotation. In the summer of 1935 the New Hampshire Commission caused something of a commotion by requiring, not as a matter of statute but in the exercise of its administrative discretion, that a refunding issue be sold on a competitive basis. This policy was adhered to in subsequent issues totalling about $45,500,000 and involving annual savings of interest amounting to nearly $500,000.

Predictions were made of dire consequences to result from the disruption of existing banking connections and controversy was waged over the question whether the admitted immediate savings in the cost of money to the borrowing utilities were really in the public interest. This is not the place to debate this question. The point is simply that commissions are likely in the future to pay more attention than they have in the past to the terms and prices of security issues.

Lest there be misunderstanding, it should be emphasized that the New Hampshire Commission has never committed itself irrevocably to competitive bidding under all conditions or advocated its adoption in all circumstances. The practice has been employed when the major capital requirements of the principal electric companies operating in the state were being met for a long time to come. The results then were on the whole salutary. Such comparative data as have been compiled show that the securities thus sold were issued under terms, at prices, and with underwriters' spreads or bankers' commissions which were very favorable to the operating companies. Furthermore, there is no real evidence of a long-run adverse effect upon either the credit of the issuing companies or the appetite of dealers for additional securities. But under less favorable market conditions the story might be very different and for companies lacking seasoned investment markets and wishing to sell small issues the commission has sanctioned private sales when convinced that the prices proposed were reasonable and that the costs of registration for public offering would offset such savings as might be expected to result under competitive tenders.

The concluding installment of this look ahead into regulation, which will appear in the next issue, will contain a discussion of the outlook under conditions of emergency. The approach to that discussion will be through an examination of the objectives to be sought and the possible procedures to be employed—all in the light of our experience in the first World War emergency and also in light of the significant regulatory changes which have taken place since that time.

Progress in County Zoning:
Marathon County, Wisconsin

By J. M. ALBERS*

THE enactment of the Marathon County zoning ordinance on May 4, 1940 is a landmark from which one may well review the progress of county zoning in Wisconsin. This progress can be measured in terms of changes in the enabling act, in the adaptation of ordinances to new and different conditions, and in the development of the mechanics of administration and enforcement.

Wisconsin's county zoning enabling act was passed in 1923, the first comprehensive statute under which all counties could zone, in contrast to some statutes granting this power to specific counties or towns. The original law was designed to permit the county to regulate suburban territory outside the jurisdiction of city ordinances. Milwaukee County enacted an ordinance intended to protect rural property against unregulated expansion of urban uses in 1927. To meet the land-use situation in the cut-over region, the enabling act was amended in 1929 to permit any county board to determine the areas within which agriculture, forestry, and recreation might be conducted. This was an innovation in zoning because it permitted the restriction of the land uses at the other end of the scale instead of treating them as a mere residuum. Under the amended statute, Oneida County, in 1933, adopted an ordinance to prevent scattered settlement in submarginal areas and thereby prevent the establishment and maintenance of high cost roads, schools, and other public facilities. Since 1933, 24 other counties have enacted similar ordinances and 10 of these also have "recreational districts" in which year-long residence is permitted but agriculture retained among the prohibited uses.

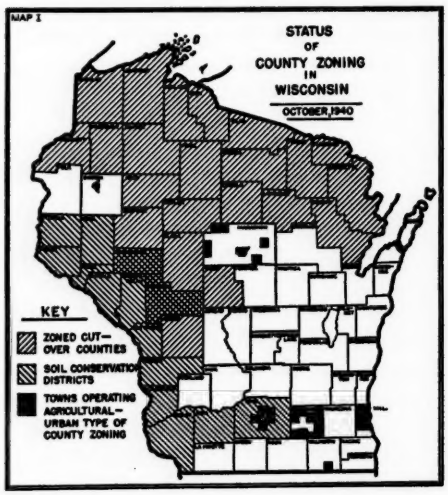
A still later amendment put the statute in its present form so that now it is fully as comprehensive as the zoning law for cities and in some of its aspects more so. Counties may now determine and regulate not only the areas in which agriculture, forestry, and recreation may be conducted, but also the location of schools, trades, and industries; the location, height, bulk, and size of buildings; the size of yards, courts, and open spaces, the density and distribution of population; setback building lines; and the uses along natural water courses, streams, and creeks. The Jefferson County ordinance embodies many of the last mentioned powers granted to counties by this amendment.[1]

Zoning thus had its genesis in two extreme and opposite conditions: in Milwaukee, the most highly urbanized county in the state, and in the 25 cut-over counties with difficult problems of idle land, maladjustment in land uses, tax delinquency, and a constantly increasing area of publicly owned land. However, between the two extremes there are 45 counties of which it used to be said that zoning and other land-use regulations would have no application. Nevertheless, within this "purely agricultural region" 15 counties have voted to become soil conservation districts under the Wisconsin statute which permits the setting up of such districts on a coun-

* Area Planning Engineer, Wisconsin State Planning Board. The writer wishes to acknowledge his indebtedness to Dr. George S. Wehrwein for his many valuable suggestions and comments, which have helped to give the article whatever merit it may have.

[1] J. M. Albers, "New Uses for County Zoning: The Jefferson County, Wisconsin Ordinance," 14 *Journal of Land & Public Utility Economics* 460–2 (Nov. 1938).

ty basis. Furthermore, some of the same group of counties have adopted zoning ordinances to regulate land uses other than those "zoned" in Milwaukee County or in the cut-over region (See Map I).



Although the Dane County ordinance is concerned primarily with suburban territory, the Walworth and Jefferson County ordinances regulate primarily recreational and residential land, and the latter almost exclusively the land riparian to streams and lakes. There is, however, a small forestry district in Jefferson County.[2] As a matter of fact, the 45 counties can be subdivided into those primarily agricultural and those heavily urbanized and industrialized. Nevertheless, with the rapid "decentralizing" of residences and industries into the rural-urban fringe, even cities in the cut-over and agricultural areas are becoming concerned with the same problems that faced Milwaukee and Dane counties.

The Local Situation

Marathon County is unique in that its land uses call for an ordinance that combines features of the cut-over regulations with those needed in suburban areas plus some new features not found in any other Wisconsin ordinance. Marathon is the largest county in the state, containing 1,009,408 acres or an area considerably larger than Rhode Island or 5/6 that of Delaware. Because of its size and the fact that almost 77% of its area is in farms, it has more farms than any other county in the state, 7,039 as compared with 6,157 in its nearest competitor, Dane, which is also a large county. In 1936 it ranked third in terms of gross farm income, being exceeded only by Dane and Dodge counties. With a well developed agriculture and manufacturing, Marathon ranks in the upper third of Wisconsin counties.[3]

Marathon lies on the edge of the cut-over region; in fact, it is almost surrounded by counties zoned for agriculture, forestry, and recreation. Although it has some of the characteristics and problems of this region, at the same time it has an excellent agricultural development as the above figures indicate. Marathon shares with the more southern cut-over counties an annual precipitation of 30 to 32 inches, a mean annual temperature of 42 to 44 degrees, and a growing season of 120 to 130 days. The elevation and latitude of the more northerly counties are such that in Forest County, only 25 to 30 miles farther north, the dates between the killing frosts for corn average less than 100 days. However, the chief difference between Marathon County and its cut-over neighbors is not so much in climatic conditions as in soils.

The Wisconsin River flows through the county from north to south and practically bisects it. Topographically the portion east of the river is generally flat whereas the west side is rolling. The ex-

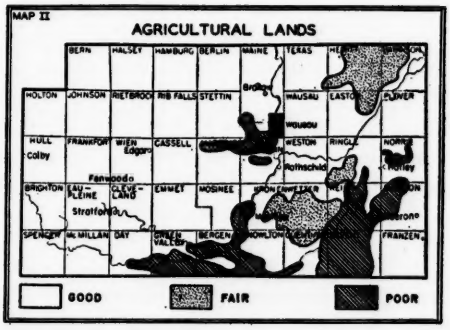
[2] *Ibid.*

[3] The factors considered in establishing this rating are production possibilities, health, population, occupational trends, local governmental expenditures, relief, per capita wealth and income, the number of vehicles, education, and tax delinquency.

ception to this general picture is an area south of Wausau where the Mosinee Hills and Rib Mountain present a more rugged topography. The latter is the highest point in Wisconsin and has an elevation of 1,940 feet. The soils are generally glacial loams and from the standpoint of suitability for agriculture may be divided into three classes as broadly generalized on Map II and subclassified as follows: good agricultural land, 80.40%; fair agricultural land, consisting of 2.48% sandy and 7.70% wet mineral soils; and poor agricultural land made up of 0.11% rough stony, 3.83% peat, and 5.48% submarginal sandy soils.

The "fair" tract shown in the northeastern corner is a continuation of similar tracts in the cut-over county of Langlade. The "fair" and "poor" lands in the southeastern quarter are interspersed with plots of good land. These plots are frequently small, sometimes not amounting to one good farm in extent, and in zoning the county they are included in the forestry district and the existing farms continued as non-conforming uses. This plan is satisfactory as it prevents attempts to extend such farms into "poor" areas. From the standpoint of present use, the north one-half and the southwest one-fourth of the county are good crop-pasture land; the southeast one-fourth is about equally divided between crop land, pasture land, second growth timber, and waste land.[4]

Originally the western half of Marathon County was almost wholly covered with oak and maple forests interspersed with some pine. The eastern half was covered by pine forests, red and white predominating. By 1932 the original forest cover had practically disappeared. A small amount of hardwood remained in the north, and some of the original pine



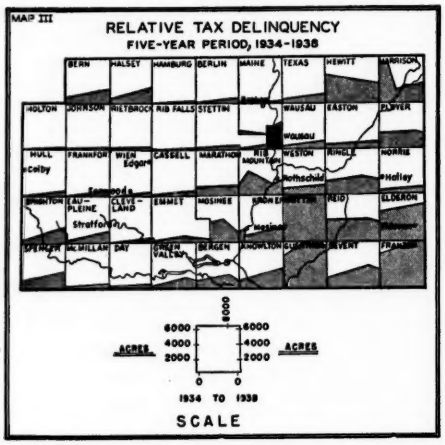
still stood in a narrow strip along the river. As in all of this country, agriculture attempted to follow the lumber industry, and this has been successful in Marathon County where soil and climatic conditions are conducive to such operations. Most of the good farm land in Marathon County is located west of the river. The soils which sustained the pine forests in the east are not generally good agricultural lands, and in some places removal of the timber has produced problem areas. One reason for adopting a zoning plan was to regulate land use so as to prevent continuation of attempts to farm these poorer lands which are better adapted to the production of timber crops.

One of the indicators of maladjustment of land uses in northern Wisconsin is tax delinquency. In Marathon County tax delinquency is heaviest in the eastern and southeastern portions and coincides closely with the areas of poor land. Map III shows the relative delinquency by towns on the basis of the total levy for the 5-year period 1934–38 inclusive. However, the county is fairly stable from the standpoint of real estate values as is indicated by the following equalized figures for a 15-year period:

[4] In contrast, Langlade County, one of the best cut-over counties, has about 24% of its area classified as good, 26% as fair, and 47% as poor or submaginal for farming purposes. (The remaining 3% is the area in water.) In Forest County, one of the poorest in agricultural resources, over 80% of the land is unsuited to commercial farming and only 7% is classified as "non-problem agricultural land."

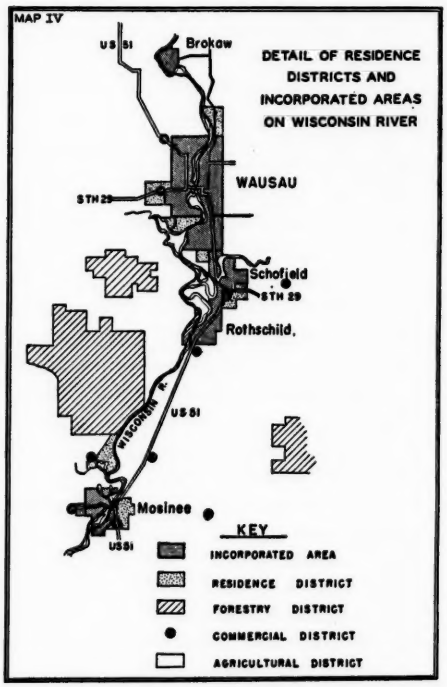
1923	$ 81,218,000
1928	105,749,000
1933	76,890,000
1938	81,554,000

In the last 10 years these values were reduced by 22.7%. Forty-one of the 71 counties showed a greater decline, some as high as 65%. Only 9 counties showed less than 15%, the lowest being 0.4%.



The second type of problems for which the Marathon County ordinance sought a solution was the protection of land uses near cities. The original stand of timber gave rise to sawmills and woodworking industries around which cities and villages developed at strategic points. Today an important part of Wisconsin's paper industry is located in Marathon County. The combination of water power on the Wisconsin River and the easy access to raw materials makes the river cities highly desirable for such manufacturing processes. In 1931 Marathon ranked tenth among Wisconsin counties in the value of manufactured products and employed 3,581 workers in 188 establishments.[5] Besides, Wausau is the center of one of the largest and richest of Wisconsin trade areas.[6]

In spite of its high position among the agricultural counties of the state, in 1930 almost 46% of the 70,629 people lived in incorporated places—two cities and 14 villages.[7] An interesting concentration of urban population has taken place along the Wisconsin River from Mosinee to Wausau and here the residential districts have been provided for in the zoning ordinance (Map IV).



The Procedure of Enactment

Early in 1939 the county authorities began to consider the desirability of developing a plan to guide future land use in the county. The proposition was approached with considerable deliberation, but there was also an idea that some speed was desirable. The deliberation arose from the fact that the general aspect of the county is such that it partakes of some of the characteristics of

[5] Wisconsin State Planning Board, *Regional Plan Report*, 1934, p. 314.

[6] *Ibid.*, p. 327.

[7] One city and two villages are on the line between Clark and Marathon counties. The above figures include only those living in Marathon County.

both the cut-over region and the urbanized areas and is of great size. Speed was desirable because the authorities realized that certain rapidly developing conditions would have to be faced at an early date and that a zoning ordinance would contain the answer. The advice of the State Planning Board was in favor of deliberation.

In order that a proper basis for procedure might be established, considerable time was spent by the staff of the Wisconsin State Planning Board in producing maps to show soils, tax delinquency, location and use of buildings, forest cover, and subdivided areas. Use of these studies was supplemented by aerial photographs of the whole county and as much field work as was necessary.

The procedure for developing a county zoning ordinance in Wisconsin may take different forms. In the 25 northern counties the county boards directed a committee of the board to prepare a zoning ordinance and map. This committee made the necessary investigation and with the advice and guidance of those who are familiar with zoning technique reported the proposed ordinance and map to the county board. If there is a rural planning committee or a county park commission, it is the duty of such committee or commission to make these studies and recommendations to the county board. The zoning committee of the county board is a committee appointed expressly and solely for the purpose of making the zoning ordinance; the rural planning committee consists of the chairman of the county board, the chairman of the road and bridge committee, and the county superintendent of schools, ex-officio members and two others chosen by the ex-officio members. The county park commission is a continuing body consisting of seven members appointed for a term of seven years, only one term expiring each year. Its functions are broad and really those of a planning body in the strict sense, and the overlapping terms of membership make for a continuity of policy that is most desirable.

The Wisconsin statutes require that the county park commission, if the county has one, shall first prepare a tentative ordinance and hold public hearings thereon. After the hearings, the park commission recommends the ordinance to the county board for its consideration. If it so desires, the county board may then approve the ordinance for submission to the towns. The town boards then take such action as they deem proper, after which the county board may pass the ordinance, it being in effect in those towns whose town boards have approved it as it affects their towns. It should be noted that the action in the towns is by the town board, which consists of three "supervisors," one of whom is chairman of the town and represents it on the county board of supervisors, and not by the town meeting at which the electors are gathered.

Quite obviously, the effect of this legal process is such as to bring the proposed regulations to the direct attention of those affected by them. Experience with county zoning in Wisconsin demonstrates the importance of having the people become thoroughly familiar with the proposed regulations. No such ordinance can be successful without public support and such support can only come with ample discussion. The Marathon County authorities were fully aware of this fact, and they therefore took it upon themselves to become so thoroughly familiar with the regulations, the reasons for them and their effect, that they were able to conduct extra-legal, educational hearings in all the towns. After the discussions before the county board and the town hearings had been completed, the town boards, before taking action, exam-

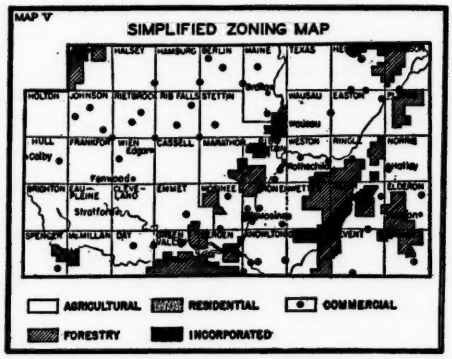
ined the district boundaries as proposed for their town with great care. This brought about some changes in the original plan, but it can be said that, being based on intimate knowledge of the community, their effect was to increase public support without weakening the ordinance.

The ordinance was adopted by the Marathon County board on May 4, 1940, and up to the present time has been approved by 8 town boards as shown on Map I and therefore is effective in only those 8 towns. This is an important feature of the Wisconsin law; as this map shows, even Milwaukee County zoning is not effective in two towns and in Walworth only one town board has so far approved the county ordinance enacted in 1938. In Dane County the ordinance is in effect in practically all the towns with suburban conditions and this is as far as the regulations were intended to go. In Jefferson the ordinance awaits the approval of 5 out of the 16 town boards. The difference in the nature of zoning well settled areas where many more people and conflicting interests are affected in contrast with simple land-use regulations in sparsely settled areas is apparent in this connection. The approval of the town boards in the 25 northern cut-over counties came shortly after enactment of the ordinances by the counties.

The Marathon County Ordinance

This zoning ordinance, because of conditions discussed above, is a combination of the regulations found in the ordinances in effect in the cut-over region and those used in a highly urbanized county. This is obvious in the very first section containing the definitions. Here are defined, on one hand, such terms as family, single- and multiple-family dwellings, boarding house, lodging house, hotel, lot, etc., and on the other, airport, fur farm, forest products, roadside stand, summer lodge, summer residence, and tourist camp.

The county was finally divided into four districts—forestry district, residence district, agricultural district, and commercial district (Map V).



The forestry district is the most restricted. The permitted uses are only those which are compatible with the production of forest products and the use of land for purposes of recreation and the conservation of water resources. Year-round residence and cultivation of the land are not permitted. These regulations are reasonable because the district generally contains those areas which are either poor agricultural land, waste land, or lands now covered with second growth timber. They will have the effect of preventing further attempts to farm lands unfit for cultivation as well as preventing expensive schools, roads, and other governmental services.

The residence district includes some areas in the environs of Wausau and other incorporated places and also some stretches along the Wisconsin River which are desirable for residential use. The establishment of this residence district was found to be necessary because of the substantial development outside the limits of incorporated cities. These residential developments are new, and in some cases, the growth of only a few

years. They represent a very large investment which must be protected from the same destructive influences that exist within the cities. This district permits residential and agricultural uses together with accessory and supplemental uses, such as telephone and telegraph offices, schools, cemeteries, and charitable institutions. Regulations also control the height of buildings, the minimum width and area of lots, and the width of side yards. Whereas farming and gardening are permitted, poultry and fur farms, stock farms, etc., are prohibited.

In Marathon, as in other counties, these areas are set up as strictly single-family districts. In addition to the use regulations, this ordinance requires a minimum lot area of 8,000 square feet with a minimum width of 60 feet. The aggregate width of side yards is a minimum of 20 feet, and no single side yard may be less than 8 feet. The height is restricted to 2½ stories or 35 feet.

In so far as lot area and width are concerned, these dimensions are somewhat greater than has been the practice within the cities. However, the regulation is well received and some counties are considering even larger lots, from 10,000 to 20,000 square feet. Where such minimum dimensions are in effect, experience indicates a demand for them even for relatively low cost developments.

The Marathon County ordinance has two districts not found in the other county ordinances. In the cut-over type of zoning, restrictions were placed on land uses in the "forestry" and "recreation" districts but the remainder of the county was left in an "unrestricted district." Likewise in the suburban type of zoning the residential, commercial, and industrial zones touch only the land adjacent to cities and leave the rural areas without any restrictions. This means that in the areas omitted or called "unrestricted" not only agriculture but subdivisions, "shack towns," stores, factories, trailer camps, taverns, junk yards, billboards—in short, *any* and *all* land uses—can legally be placed.

The fact that many of these uses are as undesirable and incompatible in a farming area as in a city was recognized in the Jefferson County ordinance. Subject to limited modifications by the board of adjustment, in the agricultural district of this county, hazardous uses, or "uses noxious by reason of emission of noise, smoke, gas or odors," junk yards and automobile wrecking yards, taverns nearer than 1,000 feet to any school, church or residence, and tourist camps (unless meeting certain requirements and regulations) are prohibited. Since these uses are likewise forbidden in the more restricted forestry and "conservancy districts" of this county, about the only place open to them is in unzoned incorporated territory. This is a neat reversal of the usual tendency for cities and villages to "dump" unwanted uses on the open country!

The Marathon County ordinance goes a step farther. Residential and agricultural uses are permitted in the agricultural districts, together with those industries associated with farming, such as condenseries, cheese factories, creameries, and pea viners. Not only the uses enumerated specifically as prohibited in Jefferson County but *all* commercial and industrial uses are excluded except the processing of natural resources. Furthermore, the district is subject to the same regulations controlling residences as are found in the residence district. None of the districts—forestry, residence, or agricultural—permits the erection of advertising signs. This particular regulation was subject to much discussion and the county board decided to treat outdoor advertising as a business and exclude it from the three districts.

Whereas Jefferson County excludes

certain enumerated forms of business or industry from the agricultural district, the permitted uses (such as stores, taverns, elevators, factories, hotels, and outdoor advertising) may locate anywhere throughout the areas not covered by conservancy or forestry districts. The Marathon County ordinance, however, sets up definite areas where business and industry may locate after being excluded from all other districts. These "commercial districts" are to all intents and purposes similar to the "light industrial districts" of urban zoning. Here all the uses permitted in the forestry, agricultural, and residence districts are permitted plus the uses found in the ordinary commercial districts, with such additions as will broaden their service to rural areas. However, the regulations in these districts contain minimum lot sizes and widths, and maximum heights for the buildings to be used for residential purposes. Billboards and tourist camps, being classified as business uses, are permitted only in the commercial districts. The commercial district is, to all intents and purposes, a light industrial district. These districts are located at such points in the unincorporated areas as are now used for commercial purposes and such other places as appear to be desirable for future development.

The tourist and cabin camp has presented some pressing problems. The tendency has been to make such accommodations a permanent residence, thereby producing unwarranted school, health, and relief problems. In order to obviate such conditions, tourist camps may be occupied by any family other than the owner for a period of not more than 90 days in any one year.

Highway Setback Lines

Marathon County has its highway problems just as does any other county. The constantly increasing use of the roads and the resulting demand for proper maintenance, improvements in grade, width, and alignment, and the removal of unnecessary and avoidable hazards made it desirable to set up some control over the location as well as the use of roadside buildings. Other considerations supporting such regulations are the excessive cost of improvement damages when highways are widened, the hazards produced by buildings in close proximity to the right-of-way, and in these northern counties, the large problem of adequate and prompt snow removal.

Snow-removal and maintenance problems are considerably aggravated by the custom of removing field stones and piling them on the fence lines. As the piles increase, they encroach on the highway right-of-way and interfere with proper operation of road machinery. In order that this situation may be controlled, the following sentence was added to the definition of a "Building":

"For the purposes of this ordinance, any object placed within the setback lines which may tend to obstruct traffic, to make more difficult the maintenance of the highway or to increase the accumulation of snow upon the highway shall be considered a building."

The Wisconsin county zoning statute includes authority to establish highway setback lines, and their adoption will aid largely in solving the problems mentioned above. In the Marathon County zoning ordinance a separate section is devoted to the establishment of setback lines, the substance of which is as follows:

All highways in the county were divided into two classes—Class A and Class B.

Class A includes all state trunk highways, county trunk highways, and other highways of sufficient importance to be regarded as future major roads. For this class the setback line is established parallel to and distant 100 feet from the center line.

All other highways are classed as B, and

the setback line is established at 75 feet from the center line.

At all intersections where grades are not separated, an additional vision-clearance cut-off of 50 feet measured on the setback line is established.

The ordinance generally prohibits the erection, construction, or moving of any building or structure within the setback lines, but does not prohibit use of the land for crops or pasture.

It should be emphasized that, just as in Jefferson County, the setback-line regulations are county-wide and are in force in all four zones in those towns where the town boards have approved the zoning ordinance.

Administration

The Marathon County ordinance also has provisions for administration and enforcement not found in any previous Wisconsin rural ordinance. One of the most puzzling problems in connection with rural zoning is that of the recording of non-conforming users, checking the discontinuance of these uses, and preventing the establishment of illegal uses within the restricted districts. The cut-over counties, at first by ordinance and then by an amendment to the enabling act itself, provide for the making of a list of non-conforming users by the county board of supervisors which is filed with the register of deeds and the county clerk. The latter officer is to furnish each town assessor with a record of the list of non-conforming uses of the town in which the assessor resides. The assessor is required to report the non-conforming uses which have ceased to exist to the county clerk and register of deeds who then strike them from the record.

This is an attempt to administer the zoning ordinance without adding new officials or adding greatly to the load of existing officers, designed especially for the frontier and financially weak counties. However, the counties with suburban and multiple zoning are in the wealthier parts of the state and can afford to use more direct methods of administration. The enabling act permits this; it says,

"The provisions of this subsection shall not apply to those counties issuing building permits as a means of enforcing the zoning ordinance or of checking non-conforming uses, or to counties which have instituted other devices for this purpose." (Sec. 7d of 59.97.)

Where building permits are issued, zoning administration is simplified. It is not necessary to make a list of non-conforming users to detect violations. The officer in charge of issuing permits simply refuses to issue a permit for an illegal structure or use within the zoned areas.[8] This system is in use in Milwaukee and Dane counties, whereas Jefferson County requires the listing of non-conforming uses in accordance with the enabling act. The matter of building permits for the entire county was widely discussed in Jefferson County, but a supplementary ordinance which would embody this feature was not adopted.

The Marathon County ordinance, however, makes direct provision for building permits but with modifications in the agricultural district. The ordinance is enforced under the direction of the county board by means of building permits which are required before any structure may be erected, altered, or moved in the forestry, residence, or commercial districts. In the agricultural district owners are required to notify the county clerk of their intention at least two weeks before any building operations are undertaken. Both the application for

[8] Building permits per se, without a list of non-conforming users, do not assist in determining when a non-conforming use has legally ceased to exist. This phase of zoning enforcement needs clarification and further legislation in both urban and rural spheres. (See Alfred Bettman, "A Backward Step in Zoning," pp. 455–7 below.)

the building permit and the notice will contain an adequate description of the land, the building, its construction, proposed use, the district in which it is located, and the distance from the center line of the highway.

Building permits are issued by the county clerk. In the case of the notice in the agricultural district, he is required to notify the owner or his agent as to the compliance of his proposed construction. Penalties are provided for violations.

The ordinance contains the usual provision covering completion and restoration of existing buildings, the boundaries of districts, the methods of interpretation and application, and changes and amendments.

Board of Adjustment

Boards of Adjustment are considered important, if not indispensable, in the administration of zoning. The Wisconsin Enabling Act (59.97) does not make provision for such boards but another statute (59.99) says that "counties *may* provide for the appointment of a board of adjustment." This statute, however, seems to be especially designed for suburban zoning, is detailed and complicated, and as far as is known none of the cut-over counties have availed themselves of this law. Dane and Jefferson counties accepted this form of board of adjustment and provided for it directly in their zoning ordinances.

Marathon County also provided for a three-man board following the provisions of 59.99. This board has the usual general authority of such a body for the adjustment of unnecessary hardships and in addition has certain specific powers. The more important of the latter are:

1. To grant a permit for the erection and use of a building or premises in any location to a public service corporation or utility which is found to be necessary to the public convenience, safety, or welfare.

2. To grant a permit for the use of premises in the agricultural or commercial districts for automobile wrecking yards when, in the opinion of the board, the location will not be injurious to neighboring property or to the public health, welfare, or convenience. The board may also specify reasonable conditions for safeguarding the public interest. This is the only method by which an automobile wrecking yard can be established.

3. To grant a permit, after public hearing, for the erection of buildings or structures to be located within one mile of the boundaries of any airport to a height greater than permitted by the ordinance when the board shall have determined that such construction will not constitute a hazard to the normal, safe operation of aircraft. The ordinance provides that no building located within one mile of the boundaries of any airport shall be carried to a height great than 1/30 of the distance between the airport boundary and the structure.

4. To grant a permit to vary the setback regulation in the commercial district when it shall have determined that such a variation will not hamper the maintenance or future development of the highway. Such a permit may be conditioned upon future highway improvements.

Conclusion

The variety of conditions which the Marathon County ordinance proposes to regulate and the methods set up for that purpose are an outstanding accomplishment in a predominantly rural county. The county authorities were very earnest in their efforts to develop a code which would be reasonable and workable and to this end made extraordinary efforts to make it cover the conditions and still be simple and comprehensible. Its operation will be watched with much interest.

Diversion of Freight Traffic from the Railroads

By EDMUND J. PHILLIPS, JR.*

THE purposes of this article are two: (1) to summarize the major problems encountered in measuring the amount of freight traffic "diverted" from the railroads by competitive agencies of transportation and by other economic changes; and (2) to extend one particular study to obtain a picture of the importance of such losses as compared with the losses which have been sustained solely as a result of decreased productive activity generally.

The Meaning of "Diversion"

To the average person, the noun "diversion," when used in connection with freight traffic lost by the railroads, connotes a loss of traffic caused solely by the growth of competitive agencies of transportation, viz., ton-miles "diverted" from the railroads to trucks, waterways, etc. However, as used in this and many similar studies, the term has a much broader aspect, involving not only losses to competitive agencies but several other types of traffic losses as well.

Any rise or decline in railroad freight traffic may be considered as composed of three parts: one part ascribed to a rise or drop in the general level of productive activity; a second part gained from or lost to competitive agencies of transportation; and a third part ascribed to other economic changes. Among the latter may be listed: (1) changes which materially affect the length of haul, e.g., changes in the relative location of industries, sources of raw materials, and consumption markets; (2) changes which affect the quantity of material to be transported as, for instance, the use of hydro-electric power rather than coal or oil; and (3) changes in the consumption habits of the people, etc. Thus, over and above those losses which might be expected as a result of a low level of business activity, there may be additional losses which might be ascribed to "competition" *or* "*other* economic changes."[1]

The losses of freight traffic which arise from "competition" and economic changes other than decreased business activity are classified for purposes of this discussion as "diverted freight traffic," and the amount lost as a result of such causes is termed the amount of total "diversion."

The Diversion-Measurement Problem

The measurement of diversion would be relatively simple if we had complete data regarding freight traffic handled by competitive agencies of transportation, complete data on changing economic conditions, and means for accurate measurement of the losses attributable to decreased business activity. Since these facilities are not at hand, the problem of measurement and assignment of proportional losses to various factors is very complicated. It will be demonstrated throughout this investigation that estimates and approximations only can be made at this time.

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[1] Studies revealing the effect of different factors on railroad freight traffic losses include: (1) "Facts Relating to the Agricultural Situation in 1938," U. S. Dept. of Agriculture, Washington, D. C., January, 1938, p. 27 —a statement before the ICC in *Ex Parte 123;* (2) statement by Western Pennsylvania Refiners' Traffic Assn. before the ICC in *Ex Parte 123*, January 19, 1938, pp. 5, 6, 9, 10; (3) statistical exhibits filed in behalf of Bituminous Coal Operators in *Ex Parte 123* before the ICC, January, 1938, especially National Coal Assn., Exhibit No. 94, pp. 9, 11, 12; (4) statement by National Lumber Manufacturers Assn., Washington, D. C., before the ICC in *Ex Parte* 123, December 9, 1937.

The majority of the studies which have been undertaken have attacked the problem by comparing different types of railroad-freight-traffic data with general and commonly accepted indexes of production. For example, if an index of rail shipments is compiled for a period of years by selecting one year as the base and comparison made with an index of production with the same year as a base it has been assumed that, if the railroads consistently carried the same proportion of total goods produced in each year as they did in the base year, the two series would be identical, and that, if the two indexes were plotted, any separation of the two curves could be taken as an indication that the railroads were gaining or losing traffic, depending upon whether the railroad-freight-traffic index rose above or dropped below the production index.

With such an approach, however, several problems arise, inasmuch as a considerable amount of choice is involved. First, there is the choice of the index-of-production series to be used in making comparisons, for the general indexes commonly accepted measure business activity and production with different degrees of accuracy and completeness. Second, there is a wide range in choice of the type of railroad-freight-traffic data to be used in comparison with the selected index of production; for example, we may elect to use ton-miles, carloadings, freight revenue, or freight ton-miles originated. Finally, there is the choice of the year to be used as a reference; assignment of the base year automatically fixes the proportion of total production which it is assumed the railroads should have handled.

General Indexes of Production as Reference Media

Among the various indexes used for reference in the several attempts to measure the extent of total diversion losses we find the Warren Person's-Federal Reserve Bank index of physical production, the index of industrial production prepared by the Standard Statistics Company, and the Federal Reserve Board index of industrial production.[2] Although each of these indexes or any other of the general and readily available indexes of production might appear, at first thought, to be a logical reference medium for the measurement of diversion, all are open to criticism on the premise that they were not designed for that purpose. Each is an *indicator* of business activity, not a *measure* of production. Specifically, they are subject to one or more of the following criticisms:

(a) The index is not derived from a sufficient number of basic series.[3]

[2] Typical studies of this nature are those prepared by the Association of American Railroads as exhibits before the ICC in *Ex Parte 123*, in 1937, which utilized the Federal Reserve Board index of industrial production; a discussion and chart in *Standard Trade and Securities*, Vol. 8, No. 10, §2, August 3, 1938, Basic Survey of Railroads, p. RR–48, utilizing Standard Statistics index of industrial production; and a private study by Mr. W. P. Kellett, New York, which featured the Warren Person's-Federal Reserve Bank index of physical production. Reference to these studies will indicate radically different pictures regarding diversion as different indexes of production, different units of freight traffic, and different base years are selected for the comparisons.

[3] For example, as stated in the *Federal Reserve Bulletin* for February and March, 1927 with regard to the Federal Reserve Board index: "The index of industrial production is made up of two component indexes, one of manufactures and the other of minerals . . . it is derived from 60 individual series, measuring production in about 35 industries and indirectly representing production in many more. . . . Some of the more important manufacturing industries not included in the index are canning, butter and cheese, certain chemicals and drugs, railroad repair shops, and musical instruments. Others which are only indirectly represented by subsidiary industries are machinery and equipment, clothing, furniture, and printing and publishing of books and magazines. . . . In the construction industry, . . . which is excluded, there is no satisfactory unit in which actual physical output during a month can be measured, and the output of agriculture, which is also excluded, is

(*Footnote 3 continued on page 405*)

(b) Some components of the production index are based on railroad traffic. When "production" indexes first came into being, the railroads enjoyed a practical monopoly of transportation, and production and freight traffic were practically synonymous; for this reason carloadings or tons of particular commodities originated were taken as indexes of production of those commodities, particularly where actual determination of production was not possible. The tendency has continued in different degree in the general indexes, through utilization of actual carloadings, or deliveries and shipments having direct relationship to railroad-freight traffic.[4] When this feature is present, comparison of the production index with a freight-traffic index is, to some extent, comparison of like with like, and the presence of rail-traffic influence in the production index will tend to minimize the calculated rail-freight-traffic loss.

(c) The index is based on a "weighting" of the different series which is different from the relative proportions in which the commodities represented by those series enter into railroad traffic.[5] This may be particularly misleading where the various series entering into the final index are weighted during the combination process in accordance with value.[6] Although such weighting may be entirely satisfactory for the purpose for which the index is intended—namely, as an indicator of business activity—the relative values of the various commodities entering into freight traffic do not necessarily have any relationship to the proportions in which those commodities enter into freight revenue ton-miles, total freight revenues, or carloadings.

In brief, therefore, it may be said that general and commonly accepted production indexes designed distinctly as business-activity indicators do not present a true picture of production of those goods which enter into railroad traffic.

Selection of the Freight-Traffic Unit and Design of a Production-Reference Index

Another problem arises in the selection of the proper freight-traffic unit to compare with the production index. For example, if we arbitrarily used the average of the years 1923-25 as 100 and compared an index of railway revenue ton-miles with the Federal Reserve Board index we would have obtained indications of a considerable amount of diversion, the Federal Reserve Board index of 1936 standing at 105 and the revenue ton-miles index at only 84. However, if we had elected to compare carloadings

(*Footnote 3 continued from page 404*)
essentially annual in character. Construction and agriculture are, however, not completely without representation in the index, because of the inclusion of building materials production and of industries in which farm products are basic raw materials, such as flour, sugar, meat packing, tobacco products, textiles, and leather."

[4] In the case of the Federal Reserve Board index and the Warren Person's-Federal Reserve Bank index this criticism is not of major importance.

[5] In the Warren Person's-Federal Reserve Bank index, "Crops" are given a weight of 15 in 100, whereas of the total tonnage originated by railroads "Products of Agriculture" accounted for only 9.6% in 1930, 10.4% in 1934, and 8.8% in 1937; "Minerals and Metals" are given a weight of 15% in the index, whereas "Products of Mines" contributed 55.7% of total tonnage originated in 1930; "Trade" which is represented with a weight of 12.5 in the production index naturally does not appear in railroad tonnage in any comparable form.

[6] The *Federal Reserve Bulletin* for February and March, 1927, commented on the construction of the Federal Reserve Board index as follows: "In the minerals index the value of the average annual output of each product for the three base years, 1923–1925, was considered representative of the relative importance of that product. The weight factor for each mineral, therefore, was obtained simply by dividing the physical quantity into the value of production for these three years. In the manufactures index, however, the procedure of determining the weights was more complex because each product was weighted not only for its own importance but also for the importance of the industry and to some extent for that of the group of industries which it represents in the index."

with the Federal Reserve Board index, considerable more diversion would have been indicated, the carloadings index standing in 1936 at 75 as compared to the Federal Reserve Board index of 105. Finally, if we had elected to use gross freight revenues, we would have been even more deeply impressed as to the extent of diversion, for we would have noted that the revenue index stood at only 73 in 1936. Further, we would note that the indexes have maintained the same relative order since 1927.

Now the fact that the index for freight carloadings has been, in general, below the index for revenue ton-miles since 1927 may be explained on the basis that short-haul traffic has been the principal type of traffic diverted from the railroads. Explanation for the fact that the revenue index is, in general, below both the revenue ton-mile and the carloadings index may be found in (1) general and specific reductions in freight rates made by the roads in attempts to regain traffic being diverted or to hold traffic still on the rails and (2) indications that the class of traffic being diverted is high-rate traffic.[7] Finally, use of a carloadings index, unless corrected for car capacity or actual tonnage loadings, is likely to be misleading because of a continual trend to larger cars.[8]

We have noted that general indexes of production are designed to indicate the relative rate of production and the level of business activity. Although not sufficiently all-inclusive and not designed for diversion measurement, such indexes are based primarily, and should be based for our purposes, on data expressed in bales, bushels, tons, etc. For this reason, if a choice is to be made of an index for the most comparable unit of freight traffic, that index probably should be one of tonnage originated or terminated. At least, the above comments have indicated that the introduction of mileage by use of ton-miles, the introduction of rates, by use of freight revenues, and the introduction of changing car capacities by use of carloadings will by comparison only tend to complicate matters and confuse clear analysis of the results.

Assuming that we decide upon the use of an index of tonnage originated (or terminated) as the best freight traffic unit series, our problem will be simplified materially if we can obtain a production index which has been designed to include, to the greatest possible extent, only basic data in terms of tonnage originated or terminated, and if the production index is prepared exclusively for those commodities which enter into freight traffic, with complete coverage thereof. Finally, a major weakness involved in use of generally accepted indexes of production will be overcome if the various series entering into the final production index are weighted according to the proportions in which the various commodities they represent enter into total railroad-freight tonnage.

The ICC Studies

The Bureau of Statistics, Interstate Commerce Commission, has published two series of studies which take the above requisites into consideration.[9] In

[7] From *Statistics of Railways of the United States*, ICC, it is to be noted that the average revenue per ton-mile dropped, on an index basis, from 100 to 90.1 between 1928 and 1939.

[8] An increase of 20½% in average freight car capacity between 1916 and 1938 is noted in "Railroad Facts," 1939, published by Western Railway's Committee on Public Relations, Chicago, Ill.

[9] A chart comparing freight carloadings with a specially prepared index of production, including only the type of goods which contribute to railroad freight traffic, weighted according to the actual bulk or volume of goods when transported by rail, appeared in *Business Bulletin*, Cleveland Trust Company, October 15, 1935. This chart indicated a fairly close correspondence be-

(*Footnote 9 continued on page 407*)

the first series, published in 1937 and 1938, compilation of the freight-traffic index was based primarily upon tonnage originated.[10] In the second series, issued since 1938, cognizance has been taken of the fact that tonnage terminated should be used where that figure is larger than the one for tonnage originated, inasmuch as all tonnage terminated, regardless of the technicalities of phraseology, must have entered into rail transport.[11]

On the basis of information submitted by the railroads, the Interstate Commerce Commission compiles, quarterly and annually, data showing the total carload-tonnage originated (or terminated) of Class I railroads and the contribution made thereto by each of 157 classes of commodities. The 157 classes of carload commodities are arranged into five major commodity groups: Products of Agriculture, Animals and Products, Products of Mines, Products of Forests, and Manufactures and Miscellaneous. Less-than-Carload traffic is reported separately and is considered as the sixth freight traffic group.

The first step in the ICC studies which have been issued since 1938 involved the preparation of 150 separate indexes of production for the 157 carload-commodity classifications referred to above.[12] Each index showed the percentage relation of the volume of production adjusted for imports, exports, or changes in stocks to the volume of adjusted production in 1928.[13] Many different sources were used in compiling these index numbers. Production in terms of quantities raised, grown, slaughtered, mined, distilled, manufactured, etc., was the most common type of basic data used; however, in a few instances it was necessary to fall back upon shipments, imports, consumption, sales, value of production adjusted for price changes, receipts at markets, etc.

The total tonnage of a particular carload-commodity group produced in any year, obtained by simple addition of the tonnages of each commodity class in that group, was referred to the total tonnage of that commodity group produced in the base year 1928, the ratio being taken as the production index for the commodity group. Thus, indexes of production were prepared for Products of Agriculture, Animals and Products, etc. In some cases, where indexes of production had been computed for commodity classes on other than a tonnage basis, tonnage production for such classes as a whole in a particular commodity group was approximated as being the railway tonnage multiplied by the ratio of production to rail tonnage for all other classes in the particular commodity group involved.

In the case of the Less-than-Carload group, an index of production was prepared on the assumption that production of such goods followed the same trend as production of carload-freight commodities, i.e., those contained in the other five groups. Volume of production, in the form of actual figures, could not be assigned to the Less-than-Carload group since records are not available.

(*Footnote 9 continued from page 406*)
tween production and railroad freight, thus differing radically from the conclusions reached in all other reference studies mentioned in this article.

[10] "Fluctuations in Railway Freight Traffic Compared with Production," Statement 3744 (1937) and Statement 3867 (1938).

[11] *Ibid.*, Statement 3951 (1939) and Statement 4030 (1940).

[12] A combination index was utilized for single-deck and double-deck shipments of each of three classes of livestock; fresh meats, meats cured, dried, or smoked, and packinghouse products were combined; also, one index was prepared to include automobiles, autotrucks, and automobiles and autotrucks K.D. and parts.

[13] The present commodity classification of 157 different classes became effective in 1928. In order to avoid the difficulties and possible errors involved in correlating the present classification with the one in effect before 1928, measurement of diversion was limited to the period since 1928.

An index of total adjusted production of those goods which the railroads normally carry was obtained for each year after 1928 by adding the aggregate production tonnages of each of the commodity groups and determining the ratio of that figure to the aggregate production tonnage in the base year, 1928.

The second step consisted in establishing items which were termed "computed tonnage" or "potential tonnage." The application of the production index for a particular commodity class in a particular year to the railroad-carload tonnage of that class originated (or terminated, if larger) in 1928 resulted in what was termed "computed tonnage," i.e., the total tonnage of that class which would have been carried by the railroads if the traffic had increased or decreased in proportion to the production of that class of commodity after the base year 1928.

The total of the computed tonnages shown for the individual commodities comprising a particular commodity group, such as Products of Agriculture, etc., was termed the computed tonnage of the group. Likewise, the total of the computed tonnages of the six groups was termed the computed tonnage for the railways as a whole.

The third and final step consisted in the calculation of estimated losses (or gains) in railway tonnage. Any difference between the computed tonnage and the actual tonnage originated in any year for a particular class of commodity was considered as the amount of traffic of that particular class which had been lost (or gained) by the Class I railroads in that year. The difference between the computed tonnage and the actual tonnage of a particular commodity group, in a particular year, was considered as the net traffic loss for that group for that year. And the difference between the total computed tonnage of all groups and the total tonnage originated (or terminated) was termed the total traffic lost by the railroads. All losses indicated by this method were termed diversion losses.

Two Major Assumptions Considered

Now, in this procedure, two major assumptions require further consideration.[14] The first assumption, tacitly involved, is that the railroads, even if they were the only means of transportation available, would continue to haul the same proportion of produced tonnage as they did in the effective base year, regardless of whether business activity increased or decreased. This assumption is inherent in the method used to obtain "computed tonnage." Considering, for purposes of simplification, a railroad monopoly of transportation, the assumption would mean that in each year the proportion of produced tonnage *transported* and the proportion *not transported* would be constant. Such a proposition might well be questioned. It might be that *all* of a particular *increase* in production would enter into rail tonnage, or that *all* of a *decrease* in production might be withdrawn from rail tonnage. In the first instance, the roads would be expected to originate a greater proportion of total production than they had prior to the increase; in such a case the use of the same proportion in each year in calculating computed tonnage would tend to underestimation of "computed tonnage" and therefore underestimation of "diversion." In the second instance, the roads would be expected to originate a lesser proportion of total production than they did prior to the decrease, and, therefore, use of the proportion they enjoyed prior to the decrease in calculating computed tonnage would tend to over-

[14] Other weaknesses in the methodology of this study are reviewed by the Bureau of Statistics, ICC, in Statements 3951 and 4030.

emphasize diversion.

The second assumption to be discussed here is that the trend of production of Less-than-Carload freight was the same as the production of carload freight. This assumption has been defended on the basis that "practically all goods are subject to less-than-carload movement, providing a single shipment does not weigh more than 10,000 lbs."[15] This statement is true within itself but, as an argument for the second assumption, it may be questioned. There is no reason why production of Less-than-Carload freight should be assumed to parallel production of carload freight, except as such an assumption may be utilized as a matter of expediency in arriving at an answer. For example, if we make such an assumption, we automatically exclude from our measurement of diversion those items of Less-than-Carload traffic which have been produced, and possibly diverted through hand-to-hand buying. In other words, we arbitrarily exclude a particular type of change in consumer habits, the change from bulk to small unit purchases. However, the entire problem of Less-than-Carload traffic is extremely complicated. Freight forwarders, who collect such goods locally in particular centers and forward the traffic in carload lots, and consolidation of small shipments into carload lots by the shipper to obtain the benefits of carload rates are both influences which might be expected to build up carload movements at the expense of Less-than-Carload traffic, thus presenting a false indication of diversion of Less-than-Carload traffic.

In spite of these weaknesses in methodology, the Interstate Commerce Commission study will be accepted here,[16] with due reservations, as a basis for extension to determine the relative importance of losses attributable to decreased productive activity and losses attributable to diversion. We shall be interested not only in the relative importance of such losses for total rail traffic, but also in the relative importance of the losses in the commodity-classification groups and the relative importance of the groups based on losses.

Relative Importance of Losses from Diversion and Decreased Productivity

The assumption has been made in the previous sections that the spread between the curves representing computed tonnage and actual tonnage in the ICC studies represented diversion since 1928. Now the extent to which the actual tonnage-originated index drops below the base-year average (1928 = 100) in any year is per se a measure of the total tonnage loss sustained by the railroads; and, if we have confidence that our indexes of production are sufficiently accurate, we may assume that the extent of the drop sustained by the computed-tonnage index below the base-year average measures the loss which the roads have sustained as a result of changing rates in production of the various commodities entering into rail tonnage. We may compare the drop in the computed-tonnage index below 100 and the drop of the tonnage-originated index below the computed-tonnage index for each year and obtain an estimate of the relative importance of

[15] *Ibid.*, Statement 3951, p. 6.

[16] Other reference studies include: (1) a confidential report by the Bureau of Railway Economics, A.A.R., File B.R.E. 17321, on May 26, 1937, entitled "The Relation of Rail Shipments and Distribution"; (2) a confidential study by M. Tilghman Earle, Loomis-Sayles & Company, Boston, Mass., comparing dollar-revenue figures with indexes of production; (3) "Railway Freight Traffic Trends," published by the Bureau of Railway Economics, A.A.R. in February, 1940, wherein the term "diversion" is restricted to traffic lost to competitive agencies of transportation and efforts made in measurement by comparing an index of average weekly carloadings, translated to a tonnage basis, with a potential traffic index of the volume of goods which enter into traffic of all agencies of transport.

losses attributable to decreased production and to diversion. For example, if the total-tonnage-originated index in a particular year stands at 50 and the computed-tonnage index at 57.3 in the same year, the total loss in traffic is 50 points, of which 42.7 may be assigned to decreased production and 7.3 points to diversion. Such ratios have been calculated from the ICC figures for each year since 1928 and tabulated at the top in Table I. This table illustrates that total losses were sustained by the Class I roads beginning in 1930, that in 1932 such losses reached a maximum of 50.1% of the 1928 tonnage, and that general improvement was shown thereafter until 1938, when the losses jumped to 40.4% of the 1928 tonnage. In 1939 the total loss declined to 30.4%. Another observation is that the losses from decreased production were of greater importance, relative to the 1928 total tonnage originated in all years between 1929 and 1937, than were the losses from diversion; however, after 1932 the losses caused by decreased production showed a general decline until 1938, when they jumped to 23.3%, and then receded in 1939 to 11.3%. Finally, it may be noted that losses in total tonnage originated which are attributable to diversion have been steadily increasing, reaching a high of 19.1% in 1939.

Ratios indicating the relative importance of losses from decreased productive activity and from diversion within the various commodity classification groups are also presented in Table I. It will be noted that losses from diversion have been greater, in general, in the Products of Agriculture group and in the Animals and Products group than have the losses from decreased production. In the Products of Mines and Products of Forests groups, the reverse has been true, relatively high losses being indicated as a result of decreased production. In the

TABLE I. TOTAL AND COMMODITY-GROUP TONNAGE LOSSES OF CLASS I RAILWAYS SINCE 1928*

(Expressed as Percentages of 1928 Tonnages†)

Year	Total Losses	Losses Assigned to Decreased Production	Losses Assigned to Diversion
	Total—All Groups (C.L. and L.C.L.)		
1929	(g) 3.8	(g) 5.6	1.8
1930	10.8	8.4	2.4
1931	30.8	26.5	4.3
1932	50.1	42.7	7.4
1933	46.2	38.2	7.9
1934	41.1	33.3	7.8
1935	39.1	29.0	10.1
1936	26.3	13.5	12.7
1937	21.8	7.9	13.9
1938	40.4	23.3	17.1
1939	30.4	11.3	19.1
	Products of Agriculture (C.L.)		
1929	3.1	0.6	2.5
1930	7.5	2.5	5.0
1931	18.5	2.8	15.7
1932	33.2	8.0	25.2
1933	33.3	9.9	23.4
1934	34.9	19.2	15.7
1935	37.3	16.6	20.7
1936	29.0	10.4	18.6
1937	26.9	5.2	21.7
1938	21.7	(g) 4.2	25.9
1939	24.2	(g) 3.0	27.2
	Animals and Products (C.L.)		
1929	2.9	0.5	2.4
1930	10.6	3.8	6.8
1931	16.5	3.4	13.1
1932	30.5	6.1	24.4
1933	32.1	(g) 0.2	32.3
1934	21.9	(g) 1.4	23.3
1935	41.3	6.2	35.1
1936	37.5	(g) 3.0	40.5
1937	41.1	1.5	39.6
1938	43.0	0.5	42.5
1939	41.6	(g) 5.7	47.3
	Products of Mines (C.L.)		
1929	(g) 5.7	(g) 6.5	0.8
1930	8.1	7.5	0.6
1931	28.3	28.1	0.2
1932	48.3	46.6	1.7
1933	43.6	42.4	1.2
1934	37.7	35.4	2.3
1935	36.5	33.6	2.9
1936	22.8	16.2	6.6
1937	18.6	12.2	6.4
1938	41.6	31.8	9.8
1939	29.0	19.6	9.4

(*Continued on p. 411.*)

TABLE I. TOTAL AND COMMODITY-GROUP TONNAGE LOSSES OF CLASS I RAILWAYS SINCE 1928—(*Continued*)

(Expressed as Percentages of 1928 Tonnages[t])

Year	Total Losses	Losses Assigned to Decreased Production	Losses Assigned to Diversion
	Products of Forests (C.L.)		
1929	2.5	(g) 6.6	9.1
1930	28.2	21.6	6.6
1931	55.1	46.6	8.5
1932	73.1	63.8	9.3
1933	66.6	54.1	12.5
1934	64.6	50.1	14.5
1935	57.2	39.0	18.2
1936	46.7	25.9	20.8
1937	41.0	20.0	21.0
1938	55.2	31.9	23.3
1939	49.7	14.3	35.4
	Manufactures and Miscellaneous (C.L.)		
1929	(g) 5.7	(g) 6.3	0.6
1930	11.2	8.4	2.8
1931	33.4	27.4	6.0
1932	53.6	44.0	9.6
1933	49.5	38.2	11.3
1934	42.5	31.5	11.0
1935	36.7	22.3	14.4
1936	21.4	5.8	15.6
1937	15.2	(g) 3.7	18.9
1938	37.6	14.8	22.8
1939	25.3	(g) 0.5	25.8
	Less-than-Carload		
1929	2.5	(g) 4.7	7.2
1930	19.7	10.3	9.4
1931	38.4	28.7	9.7
1932	58.8	43.7	15.1
1933	61.2	39.3	21.9
1934	61.2	34.4	26.8
1935	62.0	29.6	32.4
1936	55.9	13.5	42.4
1937	53.5	7.0	46.5
1938	61.0	20.9	40.1
1939	59.7	8.8	50.9

* Source: Calculated from basic data in Bureau of Statistics, ICC, Statement 4030, File 314-B-2.

[t] 1928 base tonnage, All Groups, 1,324,043,000 tons; Products of Agriculture, 127,984,000 tons; Animals and Products, 26,495,000 tons; Products of Mines, 705,535,000 tons; Products of Forests, 106,765,000 tons; Manufactures and Miscellaneous, 320,310,000 tons; and L.C.L., 36,954,000 tons.

(g) Gain.

Manufactures and Miscellaneous and Less-than-Carload groups, decreased production losses were particularly heavy during the deep depression years, and diversion losses were showing a steady increase, with a particularly high rate of increase in diversion losses for Less-than-Carload traffic.

Now in obtaining a picture of the relative importance of the contribution of each commodity group (such as Products of Agriculture, Products of Mines, etc.) to the total loss for all groups as a result of decreased production or of diversion, it is important to note that in the base year each of these groups differed to a radical degree in contributing to the total tonnage originated (See footnote, Table I). Thus a high percentage loss in a *particular* commodity group may be relatively insignificant in actual tons when compared with the loss in total tonnage originated in *all* groups. It is important, therefore, that we compare the actual total group losses, actual group losses from decreased production, and the actual group diversion losses with the 1928 base figure for total tonnage originated for all groups—namely, 1,324,043,000 tons. These ratios, for total traffic as well as for individual groups, are given in Table II; the figures under All Groups (first column) are the same as those at the top of Table I. The percentage relationships of total group loss, group loss from decreased production, and group loss from diversion compared to total tons originated in 1928 (Table II) are plotted on Charts I, II and III, respectively.

If, referring to these charts, we rank the various groups in the commodity classification in order of importance based upon total loss in tonnage originated percentages we have: (1) Products of Mines, (2) Manufactures and Miscellaneous, (3) Products of Forests, (4) Products of Agriculture, (5) Less-than-Carload traffic, and (6) Animals and Products. If we rank the various groups in order of importance based upon ton-

nage loss percentages attributable to decreased production, the same ranking is obtained as when the groups are arrayed according to their contributions to total loss in tonnage originated, except that we might interchange Products of Agriculture and L.C.L. If we arrange the commodity groups in their order of importance based on percentage losses in tonnage originated as a result of diversion, the following ranking, results: (1) Manufactures and Miscellaneous, (2) Products of Mines, (3) Products of Agriculture, (4) Products of Forests, (5) Less-than-Carload traffic, and (6) Animals and Products.

TABLE II. TOTAL AND COMMODITY-GROUP TONNAGE LOSSES OF CLASS I RAILWAYS*

(Expressed as Percentages of Total 1928 Tonnage: 1,324,043,000 Tons)

Year	All Groups (C.L. and L.C.L.)	Products of Agriculture (C.L.)	Animals and Products (C.L.)	Products of Mines (C.L.)	Products of Forests (C.L.)	Manufactures and Miscellaneous (C.L.)	L.C.L.
	A. Total Losses in Tonnage Originated or Terminated						
1929	(g) 3.8	0.30	0.06	(g) 3.03	0.21	(g) 1.38	0.07
1930	10.8	0.73	0.21	4.31	2.28	2.71	0.55
1931	30.8	1.79	0.33	15.09	4.44	8.08	1.07
1932	50.1	3.21	0.61	25.73	5.90	12.97	1.64
1933	46.2	3.21	0.64	23.24	5.37	11.98	1.71
1934	41.1	3.37	0.44	20.11	5.21	10.29	1.71
1935	39.1	3.61	0.83	19.43	4.61	8.88	1.73
1936	26.2	2.80	0.75	12.16	3.76	5.17	1.56
1937	21.8	2.60	0.82	9.91	3.30	3.68	1.49
1938	40.4	2.09	0.86	22.15	4.45	9.09	1.70
1939	30.4	2.33	0.83	15.43	4.01	6.13	1.67
	B. Losses Assigned to Decreased Production						
1929	(g) 5.6	0.06	0.01	(g) 3.46	(g) 0.48	(g) 1.53	(g) 0.13
1930	8.4	0.24	0.08	3.98	1.74	2.03	0.29
1931	26.5	0.27	0.07	14.98	3.76	6.63	0.80
1932	42.7	0.77	0.12	24.82	5.15	10.64	1.22
1933	38.2	0.96	(g) 0.004	22.58	4.36	9.25	1.10
1934	33.3	1.85	(g) 0.03	18.85	4.04	7.62	0.96
1935	29.0	1.61	0.12	17.89	3.15	5.42	0.83
1936	13.5	1.01	(g) 0.06	8.65	2.09	1.41	0.38
1937	7.9	0.50	0.03	6.48	1.61	(g) 0.90	0.20
1938	23.3	(g) 0.41	0.01	16.92	2.57	3.58	0.58
1939	11.3	(g) 0.29	(g) 0.11	10.43	1.15	(g) 0.12	0.25
	C. Losses Assigned to Diversion						
1929	1.8	0.24	0.05	0.43	0.73	0.15	0.20
1930	2.4	0.49	0.14	0.33	0.53	0.68	0.26
1931	4.3	1.52	0.26	0.12	0.69	1.45	0.27
1932	7.4	2.44	0.49	0.91	0.75	2.34	0.42
1933	7.9	2.26	0.65	0.66	1.01	2.72	0.61
1934	7.8	1.52	0.47	1.26	1.17	2.67	0.75
1935	10.1	2.00	0.70	1.54	1.47	3.48	0.90
1936	12.7	1.80	0.81	3.51	1.67	3.75	1.18
1937	13.9	2.10	0.79	3.42	1.69	4.58	1.30
1938	17.1	2.50	0.85	5.23	1.88	5.51	1.12
1939	19.1	2.62	0.95	5.00	2.86	6.25	1.42

* Source: Calculated from basic data in Bureau of Statistics, ICC, Statement No. 4030, File No. 314-B-2.
(g) Gain.

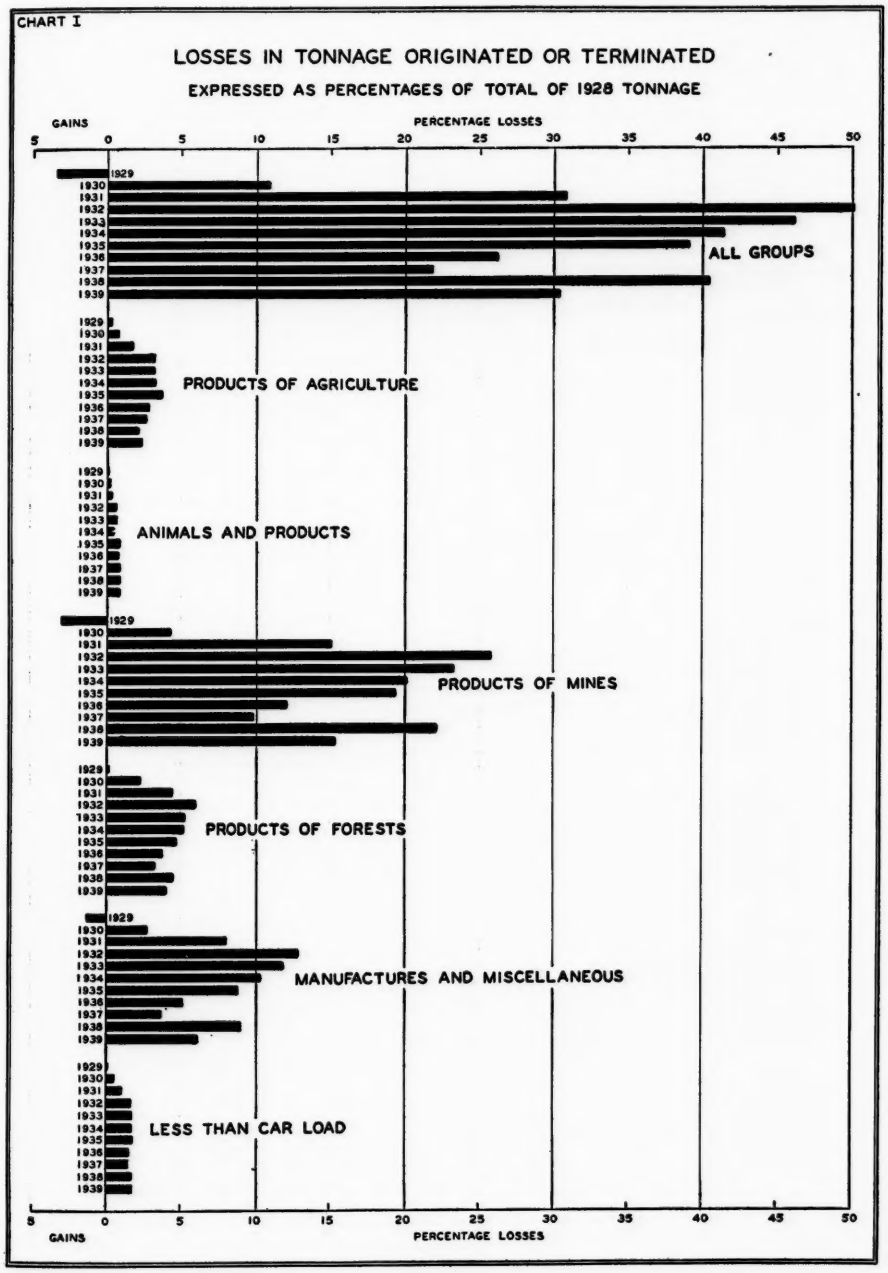


CHART I
LOSSES IN TONNAGE ORIGINATED OR TERMINATED
EXPRESSED AS PERCENTAGES OF TOTAL OF 1928 TONNAGE
GAINS
PERCENTAGE LOSSES
5 0 5 10 15 20 25 30 35 40 45 50
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
ALL GROUPS
PRODUCTS OF AGRICULTURE
ANIMALS AND PRODUCTS
PRODUCTS OF MINES
PRODUCTS OF FORESTS
MANUFACTURES AND MISCELLANEOUS
LESS THAN CAR LOAD
GAINS
PERCENTAGE LOSSES

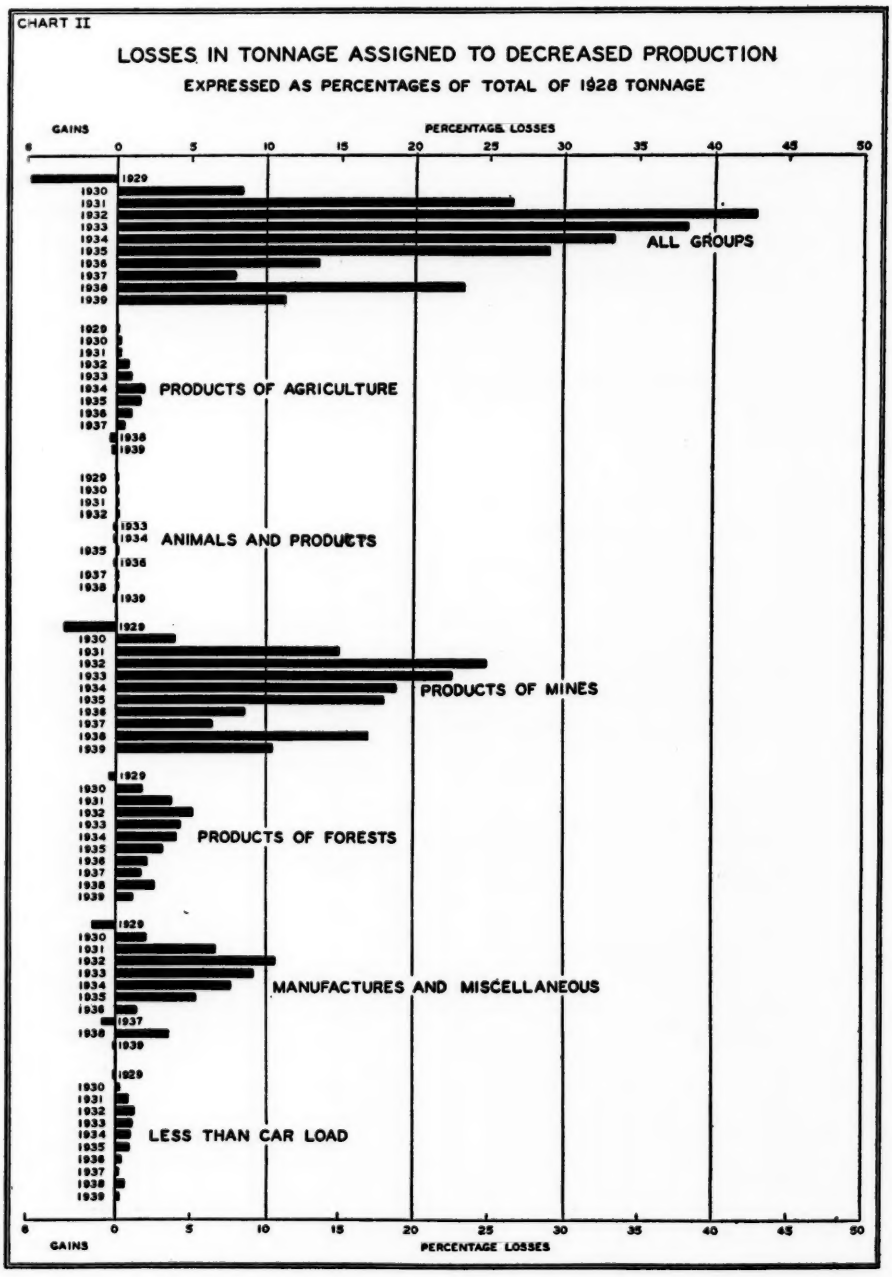


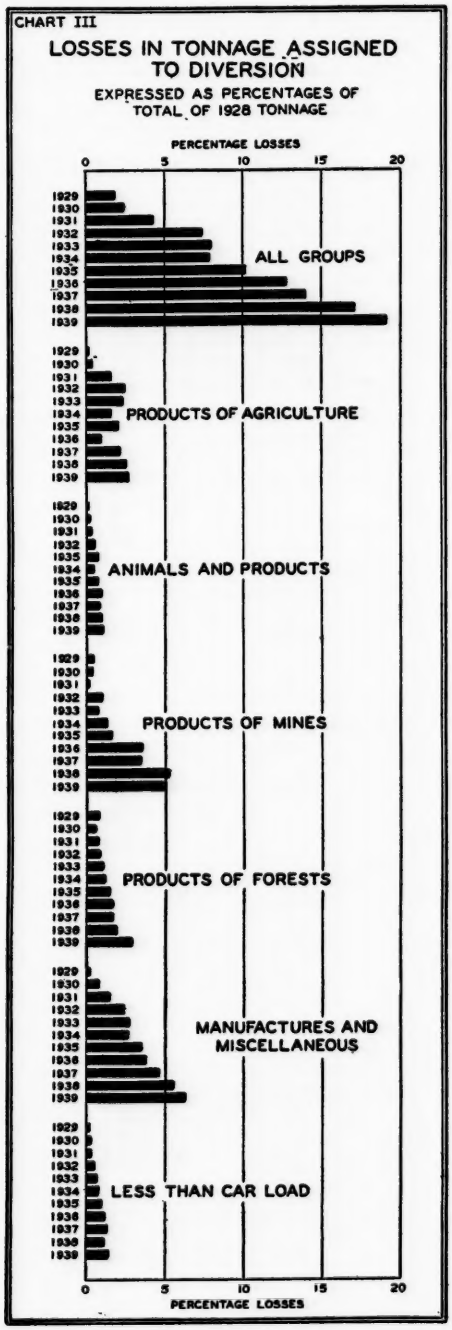
CHART II
LOSSES IN TONNAGE ASSIGNED TO DECREASED PRODUCTION
EXPRESSED AS PERCENTAGES OF TOTAL OF 1928 TONNAGE
GAINS
PERCENTAGE LOSSES
6 0 5 10 15 20 25 30 35 40 45 50
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
ALL GROUPS
PRODUCTS OF AGRICULTURE
ANIMALS AND PRODUCTS
PRODUCTS OF MINES
PRODUCTS OF FORESTS
MANUFACTURES AND MISCELLANEOUS
LESS THAN CAR LOAD
GAINS
PERCENTAGE LOSSES

Conclusion

The years since 1930 have seen the emergence of a "railroad" or "transportation" problem. That problem has been stated in many ways and various factors have been cited as responsible for its emergence and persistence. We have heard of "over-capitalization," "high wage rates," "high taxes," "decreased productive activity," "growth of competitive agencies of transportation," "subsidization," etc. However, they all boil down to the fact that the specific railroad problem today is to determine why the railroads are unable to earn an adequate net income.

From our discussion, it is apparent that great care must be taken, when figures are presented indicating the extent of "diversion," not only to interpret the meaning of the term properly but to analyze the real meaning and value of the results on the basis of the methodology used in the study.

Although the extension of the ICC analysis has indicated that tonnage losses during the depression years have been incurred primarily as a result of decreased productive activity, and that diversion losses have been steadily mounting, it must be remembered that all comparisons are on a tonnage basis, without due consideration of unit revenues or long- or short-haul problems, that the diversion losses have been calculated only for the years since 1928, and that a breakdown of diversion losses into those attributable to competition and those attributable to economic changes other than decreased business activity has not been attempted. Thus, considerable research and study remain to be done before a statistical basis for an adequate and consistent program of adjustment by the railroads to the diversion problem can be laid down.



The Location of Heirs and the Value of Their Inheritances: Farm and City Estates

By E. D. TETREAU*

IT is well known that the movement of population from farms to towns and cities has generally taken place in greater volume than the return movement from cities and towns to farms. Except for the year 1932 this excess townward and cityward movement continued through the 30's in spite of the prolonged general depression, while during the 20's it had reached the largest volume attained at any time during the history of the nation.

Some effort should be made to ascertain the extent and nature of the effects of this general movement away from farms upon the people remaining in agriculture and on their social and economic condition. Twenty years ago E. A. Ross[1] was writing about folk depletion in isolated rural communities. The implication was that talented farm people generally moved cityward leaving the country poorer in natural leaders. More recently some efforts have been made to place a valuation upon the contributions of farms to cities, through migration, by taking account of the costs of feeding and clothing, of educating, and of providing medical services for the millions of young people who have left the farms for the cities. O. E. Baker[2] has estimated that 6,300,000 net migrants from farms during the period 1920–29 represented a contribution of $14,000,000,000 to towns and cities. This is no small sum even in these days when sums that once seemed large are considered inconsequential.

Although the present study is concerned with the transfer of wealth through population migration, it is more particularly designed to ascertain the extent of this movement which has been brought to pass by the division of property among the heirs of deceased persons whose estates[3] were settled by the probate courts. "Heirs" include the wife, or husband, children, grandchildren, brothers and sisters, nephews and nieces, cousins, and all other persons named in the court records as recipients of part or all of the property of the deceased. Thus an examination of the spatial distribution of the heirs of farm estates and of the values of their shares should indicate the extent to which wealth was transferred, through inheritance,[4] from farms to city-dwelling heirs as well as to those heirs who remained on farms.

Likewise, by a study of the spatial distribution of the heirs of city estates and of the values of their shares, the extent of a countermovement from city to country can be discovered. Such study may also reveal certain space and value

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* University of Arizona.

This study was made by the University of Arizona Agricultural Experiment Station. Clerical workers were supplied by the Arizona Works Progress Administration (W.P. 706). Ohio data were drawn from *Mimeograph Bulletin* 65, Agricultural Economics, Ohio State University and Ohio Agricultural Experiment Station.

[1] E. A. Ross, *Principles of Sociology* (New York: Century Company, 1920), c. II, pp. 24 ff.

[2] O. E. Baker, "Rural-Urban Migration and the National Welfare," *Annals of the Association of American Geographers*, June, 1933, pp. 86 and 87.

[3] An estate was defined as the value of the property left by the deceased minus deductions for debts and necessary expenses, as transferred to and divided among the heirs of the deceased by action of the probate court.

[4] A study of the extent of the transfer of farm wealth by inheritance in the State of Washington was made by Fred A. Yoder and A. A. Swick, and entitled "Migration of Farm Population and Flow of Wealth," *Agr. Exp. Sta. Bull.* 315, Pullman, September, 1935.

patterns, particularly as to the relation between the distances of heirs from the counties in which the estates were settled and the values of their inherited shares.

In addition to the study of the location of heirs and the amount of their rights, information was obtained on the forms of property found in estates—farm lands, chattels, town and city real property, stocks, bonds, money, etc. Such information should throw additional light on the results obtained in the main body of the investigation. For example, if farm estates contain a sufficient amount of liquid assets to satisfy the heirs living in cities or at some distance from the farm site, should it not be anticipated that the practice of preserving farms intact from generation to generation may become rather general as families become smaller, as good land becomes scarcer, and as the place of agriculture in our national economy comes to be more clearly defined? Also, the forms of property in estates, whether farm or city, may give some clues as to prevailing ideas about the preferred means of saving and investing current income for future use.

Importance was also attached to a comparison of the changing proportions of the different forms of wealth in estates. What differences have appeared in the composition of farm estates during the past 25 years? Did farm land compose as great a percentage of the total value of farm estates during the 1920's and 1930's when land prices were falling as during the years preceding? Correspondingly, in what ways have city estates changed in composition? Have they, in more recent years, contained as great a proportion of securities as previous to the 1929 break in the stock market?

Probate court records in two Ohio and two Arizona counties were examined to obtain: itemized statements of all property in the estates; summaries of assets and liabilities; net valuations of estates; the value of each heir's share in the estate; and the location of each heir at the time the estates were divided. About 400 Ohio farm estates and 1,100 Arizona farm estates were analyzed, as well as 300 Ohio and 1,800 Arizona city estates. Ohio estates were located in Franklin and Madison counties and Arizona estates in Maricopa and Pima counties.[5]

Heirs of Farm Estates

Considerable variation was found in the number of heirs per farm estate in Ohio and Arizona. In the Ohio counties this figure ranged from 1 to 69, whereas in the Arizona counties the range was only from 1 to 17. Table I summarizes the data on this point.

Differences in the numbers of children in farm operators' families were not sufficiently great to explain the marked difference in the numbers of heirs in the

[5] Farm and city estates were distinguished by the presence or absence of farm or ranch lands in the inventories of the estates, by the presence or absence of farm livestock and implements among the chattels, and by the residence of the owner of the estate at the time of his decease. Not all criteria could be arbitrarily applied to all estates. Roughly, the presence or absence of farm lands in the inventory of the estate determined its classification. In some instances, however, the estate contained no farm or ranch lands, as in the case of a farm tenant. The livestock and implements included among the chattels then determined the classification. In other instances, the owner of the estate resided in a town or city at the time of his decease. The presence of agricultural or range lands or of farming equipment or livestock in his estate then gave the chief clues for classification. The clerk of the court and other members of the staff gave valuable assistance in determining the classification of some estates through their knowledge of the occupational interests of the property owners. On January 1, 1935, Franklin county contained 3,843 farms; Madison, 1,696 farms; Maricopa, 5,450 farms; and Pima, 1,251 farms. (*Census of Agriculture*, 1935, Volume I, Ohio County Table I and Arizona County Table I.) These counties also contain the cities of Columbus and London, Ohio and Phoenix and Tucson, Arizona.

two states. It also seemed reasonable to believe that the total number of relatives of deceased farmers in Ohio and in Arizona did not differ sufficiently to explain the difference in numbers of heirs.

TABLE I. NUMBERS OF HEIRS OF FARM ESTATES

Area	Number of Farm Estates	Number of Heirs	Average Number of Heirs per Estate
Ohio			
Franklin County..	305	1,384	4.5
Madison County..	101	538	5.3*
Arizona			
Maricopa County..	886	2,722	3.2
Pima County.....	261	753	2.9

* This figure includes one extreme case of an estate having 69 heirs; omission of this instance still leaves Madison county with an average of 4.7 heirs per farm estate. Clearly, heirs sometimes included persons of different degrees of kinship, such as grandchildren, nephews, nieces, and cousins.

Perhaps a better explanation lay in those influences that tend to detach the owners of farming property from their potential heirs. Certainly mobility would be one of these influences, because moving tends to shake off family connections and also increases the difficulty of locating possible claimants. Since about 85% of the farm operators in the Arizona counties have come from other states, whereas only 12% of Ohio's farmers came from outside the state, probably a direct relation exists between the high percentage of Arizona's farmers reared in other states and the smaller number of heirs to Arizona's farm estates, and between the low percentage of Ohio's farmers[6] that came in from outside the state and the greater number of heirs to Ohio's farm estates.

Location of Heirs and the Division of Farm Estates

One of the effects of the farm-city migration is the fact that when farm estates are settled a great deal of farm wealth is thereby transferred to the cities. O. E. Baker has estimated that from $3,000,000,000 to $4,000,000,000 was drained from farms to cities by inheritance during the decade 1920–30.[7] These figures are admittedly a rough estimate and it is not clear as to whether they refer to the wealth actually transferred by inheritance during the decade in question, or to the value of the inheritance claims eventually to be settled on account of the migration of persons during this period. Without question, the results of whatever studies have been made are either very general or extremely fragmentary. The present study includes an estimate which is considerably more conservative than has heretofore been thought to be true. Perhaps the comparative modesty of the figure arrived at will emphasize the seriousness of the problem of transfer of wealth from farms to cities by inheritance to a greater extent than if the figure had been larger.

Slightly more than ⅔ of the heirs of Ohio's farm estates and almost the same proportion of Arizona's lived in rural[8] districts at the time these estates were divided. One Arizona county showed a marked exception in this respect, however. Of Pima county's 753 farm heirs, only 256 or a little more than ⅓ lived in rural districts (Table II). This county's variation from the pattern in the other counties will receive further attention.

Although ⅔ of the heirs of farm states lived in the country, they inherited more than 80% of the value of Ohio's farm estates—almost 85% in Franklin and 71.3% in Madison county (Tables II

[6] See "The People of Arizona Irrigated Areas", 3 *Rural Sociology* 178 (June, 1938); also C. E. Lively and Frances Foote, *Ohio Agr. Exp. Sta. Bull.* 582, June, 1937, p. 7.

[7] *Op. cit.*, p. 87.

[8] "Rural" refers to open country or centers of less than 2,500 population.

TABLE II. LOCATION OF HEIRS AND AMOUNT OF INHERITANCE, FARM ESTATES*

Location of Heirs	Number and Per Cent of Heirs of Farm Estates							
	Ohio (Jan. 1, 1919–Dec. 31, 1932)				Arizona (Jan. 1, 1908–Dec. 31, 1937)			
	Franklin (305 Estates)		Madison (101 Estates)		Maricopa (886 Estates)		Pima (261 Estates)	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
In estate county	1,206	87	344	64	1,999	73	486	62
In other counties of state	105	8	124	23	17	1	27	3
In adjoining states	58	4	60	11	222	8	42	7
In other states†	15	1	10	2	484	18	198	28
Total	1,384	100	538	100	2,722	100	753	100
In centers of 2,500 and over	394	28	245	46	708	26	497	66
In rural districts	990	72	293	54	2,014	74	256	34
Total	1,384	100	538	100	2,722	100	753	100

* As shown by summary of assets and liabilities from probate court records of transfer in two Ohio and two Arizona counties.
† Includes foreign countries. Less than 1% of the Ohio heirs and between 1 and 2% of the Arizona heirs were in foreign countries.

and III). This indicates that the average value of the share of the estate per rural heir was greater than the value per urban heir. As a matter of fact, heirs of Franklin county estates who lived in rural districts received more than twice as much on the average as did urban heirs and the same was true of Madison county's heirs (Tables II and III).

Property rights in Maricopa county's farm estates were divided among rural and urban heirs in the proportions of 79.3% and 20.7%, respectively, which correspond fairly closely with the average distribution for Ohio's estates. Pima county's farm estates, on the other hand, were divided among rural and urban heirs in almost reverse proportions, for only about ⅓ of their value went to rural heirs whereas somewhat over ⅔ went to urban heirs (Table II and III).

Thus, in three of the counties a preponderance of the heirs of farm estates lived in rural areas when the estates were

TABLE III. VALUE OF PROPERTY OF FARM ESTATES DISTRIBUTED TO HEIRS ACCORDING TO THEIR LOCATION*

Location of Heirs	Value of Property Rights of Farm Estates (Dollars)							
	Ohio (Jan. 1, 1919–Dec. 31, 1932)				Arizona (Jan. 1, 1908–Dec. 31, 1937)			
	Franklin (305 Estates)		Madison (101 Estates)		Maricopa (886 Estates)		Pima (261 Estates)	
	Value	Per Cent	Value	Per Cent	Value	Per Cent	Value	Per Cent
In estate county	$3,016,568	90.8	$1,144,401	80.5	$10,159,294	78.5	$2,222,416	57.1
In other counties of state	209,404	6.3	210,470	14.8	12,904	.1	23,350	.6
In adjoining states	79,800	2.4	58,338	4.1	805,809	6.2	303,175	7.8
In other states†	18,213	.5	8,460	.6	1,962,120	15.2	1,342,913	34.5
Total	3,323,985	100.0	1,421,669	100.0	12,940,127	100.0	3,891,854	100.0
In centers of 2,500 and over	511,895	15.4	408,059	28.7	2,677,312	20.7	2,666,698	68.5
In rural districts	2,812,090	84.6	1,013,610	71.3	10,262,815	79.3	1,225,156	31.5
Total	3,323,985	100.0	1,421,669	100.0	12,940,127	100.0	3,891,854	100.0

* As shown by summary of assets and liabilities from probate court records of transfer in two Ohio and two Arizona counties.
† Only 1/10 of 1% or less of the value of Ohio estates went to heirs in foreign countries and about 3% of the value of Arizona estates.

probated; the greater proportions of the value of these estates went to the rural heirs; and the average value of inheritances received by rural heirs was remarkably greater than that going to urban heirs. Nevertheless, the amount of wealth transferred to city heirs was significantly large. In the fourth county (Pima) these three trends were reversed.

Location in Adjoining Areas

Both heirs and inheritances were largely concentrated within the counties in which the estates were located. For example, in Franklin county 87% of the heirs of farm estates lived in that county and the value of their inheritance amounted to 90.8% of the total value of these estates (Tables II and III).

Numbers of heirs of Ohio estates diminished with distance from the county in which the farm estates were located. Heirs who lived outside the county but within the state in which the farm estates were located, and heirs who lived outside the state made up 8% and 5% of Franklin county heirs and 23% and 13% of Madison county heirs. The value of their inheritances also diminished with distance from the home county (Table IV).

Since Maricopa and Pima counties contained almost ½ of Arizona's total population, the percentage of heirs of farm estates to be found in Arizona outside of these counties was certain to be disproportionately small. This was one important difference that appeared in comparison with the Ohio counties. Another difference was in the relative numbers of heirs in adjoining states and in other states, both of which figures increased rather than decreased with distance. The same was roughly true with respect to the values of the inheritances. Average values of inheritances from Maricopa farm estates were greater in

TABLE IV. AVERAGE VALUE OF INHERITANCE PER HEIR OF FARM ESTATES, BY LOCATION OF HEIRS

Location of Heirs	Average Value of Inheritance per Heir (Dollars)			
	Franklin	Madison	Maricopa	Pima
In estate county....	$2,501	$3,327	$5,082	$4,569
In other counties of state.....	1,994	1,697	759	871
In adjoining states..	1,376	972	3,630	7,159
In other states.....	1,214	846	4,054	6,782
In centers of 2,500 and over.....	1,299	1,665	3,782	5,366
In rural districts....	2,840	3,459	5,096	4,786
Average of All Heirs	2,402	2,643	4,754	5,168

Maricopa county than outside it, as in the case of the Ohio estates, but increased in average value with distance from the local area. Heirs located in states adjoining Arizona received a little more than $3,600 each, whereas heirs in other states received over $4,000. Heirs of Pima farm estates living within the county received smaller average inheritances than heirs located in adjoining or other states, a result not found in the Ohio counties. However, the larger average shares of heirs in adjoining states relative to those of heirs in other states did not indicate anything more significant than that a considerable number of these heirs were in California which borders Arizona rather than in states east of the Mississippi. The basic problem was to reconcile the general results for Ohio and Arizona.

Explanation of the location of heirs must recognize the characteristic movements of Arizona and Ohio populations. Predominant in Arizona's case has been the effect of the westward migration of people from older settled states to take up residence on Arizona farms and ranches. Not without influence also has been the influx of well-to-do eastern people who have come to Arizona for health and recreation and have pur-

chased farms and ranches. On the other hand, Ohio's farm population is largely native to the state and its movements are largely local. Thus, a greater proportion of the heirs of Arizona's farm estates would be expected to be located at some distance from the county of the estate than would be the case with the heirs of Ohio's farm estates.

The proportion of heirs located outside of Arizona was greater for Pima than for Maricopa county. This was doubtless related to differences in the agriculture of these counties. Cattle ranching predominates in Pima county, whereas farming under irrigation is the chief form of agriculture in Maricopa county. The former industry, partly because of the size of operating units and partly because of its adaptability to the housing and entertaining of winter visitors, probably attracts eastern buyers to a greater extent than smaller irrigated units which are subject to high operating costs per acre and which require detailed supervision.

Explanation of the larger average inheritances from Pima farm estates going outside of Arizona was found in the place of origin of the families on these estates. The place of origin of the families and the Pima county location of the owners of the estates gave a dual-center aspect to the pattern of distribution, both of the heirs and of the property rights they held. Although the greater shares went to the nearest of kin, the larger shares among that group went to those spatially close to the family's place of origin. Both near kinship and spatial proximity operated to increase the average shares of eastern heirs, a result which superficially appeared to contradict, but actually confirmed, the results obtained in the study of Ohio estates.

Heirs of Maricopa farm estates who lived within the county received definitely larger shares than did heirs located outside the county. In this respect the division of these estates resembled that for Franklin and Madison counties, and is explained by the predominance of farms rather than ranches in Maricopa county's estates and their established status as a family possession. However, many families of eastern origin were also among those interested in Maricopa farm estates, so that the distribution of heirs and property rights outside of Arizona resembled that of Pima county farm estates.

Location of Heirs and Division of Urban Estates

The study of more than 2,000 city estates in Maricopa and Pima counties, Arizona, and in Franklin county, Ohio, yielded results for comparison with the data on farm estates.

First, a marked difference between the results appeared when the rural and urban distributions of heirs and of rights in estates were compared. Only 2.5% of the value of Franklin city estates, 2.1% of the value of Maricopa city estates, and 7.1% of Pima city estates went to heirs who lived in rural districts (Tables V and VI). This countryward flow of rights in city property was notably smaller than the cityward flow of rights in farm estates, the percentages of value being 19 and 32 from Ohio and Arizona farm estates respectively.

Although the movement of population from farms to cities has been known to be greater than the movement from cities to farms,[9] it was important to find that the value of farm property per city heir was greater than the value of urban property per heir on farms. Thus, with respect to the value of individual in-

[9] See "Farm Population Estimates January 1, 1939," released June 22, 1939 by Bureau of Agricultural Economics, USDA, pp. 6 and 7 (mimeographed). The year 1932 was an exception.

TABLE V. LOCATION OF HEIRS AND AMOUNT OF INHERITANCE, CITY ESTATES:* JANUARY 1, 1908–DECEMBER 31, 1937

Location of Heirs	Location of Heirs and Distribution of Value (Dollars) of City Estates							
	Maricopa (1,522 Estates)				Pima (343 Estates)‖			
	Heirs		Inheritance		Heirs		Inheritance	
	Number	Per Cent	Value	Per Cent	Number	Per Cent	Value	Per Cent
In estate county	2,894	62	$ 8,649,495	75.0	540	63	$1,911,940	69.1
In other counties of state	88	2	138,392	1.2	21	2	49,804	1.8
In states adjoining state	448	10	864,950	7.5	107	13	188,153	6.8
In other states†	1,236	26	1,879,824	16.3	186	22	617,023	22.3
Total	4,666	100	11,532,661	100.0	854	100	2,766,920	100.0
In rural districts	224	5	242,186	2.1	60	7	196,450	7.1
In centers of 2,500 and over	4,442	95	11,290,475	97.9	794	93	2,570,470	92.9
Total	4,666	100	11,532,661	100.0	854	100	2,766,920	100.0

* As shown by summary of assets and liabilities, probate court records of transfer in two Arizona counties.
† Four Maricopa county heirs and 3 Pima county heirs were in foreign countries.

heritances as well as with respect to numbers of migrants, the flow of wealth in city estates to rural districts did not by any means offset the flow of wealth from farms to city residents (Tables IV and VII).

Even when the population flow from cities to farms throughout the country was greater than the reverse trend, as was the case in 1932, no corresponding increase in the flow of property rights could occur, since, as is hardly necessary to add, the movement was largely one of the unemployed seeking subsistence in the country.

TABLE VI. RURAL-URBAN DIVISION OF COLUMBUS, OHIO ESTATES: JANUARY 1, 1919-DECEMBER 31, 1932*

Location of Heirs	Distribution of Value of City Estates, Franklin County, Ohio (333 Estates)	
	Amount	Per Cent
Columbus	$2,967,240	90.6
Other Ohio cities	60,545	1.8
Other cities	167,298	5.1
All cities	3,195,083	97.5
Rural districts	80,808	2.5
Total	3,275,891	100.0

* As shown by probate court records.

A comparison of city with farm estates as to their distribution in local and adjoining areas showed that their heirs were likewise largely concentrated in the local counties as were the relative values

TABLE VII. AVERAGE VALUE OF INHERITANCE PER HEIR OF CITY ESTATES

Location of Heirs	Average Value of Inheritance per Heir (Dollars)	
	Maricopa	Pima
In estate county	$2,989	$3,537
In other counties of state	1,572	2,407
In adjoining states	1,931	1,756
In other states	1,520	3,317
In rural districts	1,082	3,274
In centers of 2,500 and over	2,542	3,237
Average of All Heirs	2,472	3,240

of their inheritances. Almost ⅔ of all heirs of city estates were located in the home counties (Maricopa and Pima), whereas of $14,300,000 worth of inherited property, over $10,500,000 went to heirs living in the local counties (Table V).

With respect to distance from the local county, the remaining heirs and inheritances (only the Arizona counties

were studied in this respect) were mainly to be found in eastern states. The explanations of the spatial distribution of farm estates may be applied to the distribution of city estates.

Transfer of Farm Wealth to Towns and Cities by Inheritance

In view of the implication that the amount of wealth transferred from farms to town and city heirs by inheritance in the Ohio and Arizona counties studied was significantly large, it seemed desirable to attempt an estimate of the value of all transfers thus made in the United States during a period of years. Such an estimate required, in addition to the results obtained in this study, a fairly accurate estimate of the number of farm real estate transfers made by inheritance. A recent study,[10] which showed the total number of all kinds of transfers of farm real estate that occurred by years for 1935 and earlier, furnished the desired information. Data for the years 1920–29 were used.

It would seem at first sight that the years during which the net population movement from farms to towns and cities was the greatest known in American history would have been accompanied by the greatest transfer of wealth to cities by inheritance. On second thought it became evident that a great part of the movement of wealth by inheritance traceable to the movement of population during the 20's took place during the 30's and doubtless continues into the 40's. Clearly, then, the movement of wealth from farms to towns and cities by inheritance during the 20's resulted from earlier as well as from concurrent movements. For this reason the results obtained by this method of estimation were not comparable to those obtained by calculating the transfer of wealth on the basis of number of persons migrating cityward,[11] but it is believed that they more accurately indicate the extent to which transfers of wealth actually took place.

Use of the available data necessitated the following broad assumptions: that the Ohio estates included in this study were representative of all estates in the counties east of the Mountain states; that the Arizona estates included here were representative of all estates in the counties of the Mountain and Pacific states; and that the counties studied by the United States Department of Agriculture lying east of the Mountain states were representative of all counties east of these states; and that the counties studied lying in the Mountain and Pacific states were representative of all counties in these states.

From the USDA study it was estimated that 431,000 transfers of farm real estate occurred during the 1920–29 period—362,785 in the counties east of the Mountain states and 68,215 in the Mountain and Pacific states.

Applying the results of the farm estate and USDA studies it was estimated that during 1920–29 a total net value of $1,109,000,000 was transferred from farms to cities in the payment of the shares of city heirs in farm estates throughout the country. Of this sum, $793,000,000 came from farm estates east of the Mountain states and $316,000,000 from the Mountain and Pacific states. These totals took account of the value of all forms of property that went to make up the farm estates studied—farm real estate, town real estate, chattels, notes, etc.

Although the information on transfers

[10] Eric Englund, M. M. Regan, and A. R. Johnson, *Transfers of Farm Real Estate.* Data from 485 selected counties, USDA, BAE, Washington, D. C., August, 1939.

[11] Baker, *op. cit.*

during 1930–39 was not complete, estimates based on numbers of transfers during the first five of these years showed an increased number of transfers by inheritance. This may be assumed to have compensated for decreases in the value of property during these years, although values of estates for the years 1920–29 were conservative. With the probability that the numbers of urban claimants on farm estates did not decrease during 1930–39, there seemed to be good reason to hold that the flow of wealth cityward from farms did not decrease appreciably on account of the transfer of wealth by inheritance during this decade as compared with the years 1920–29.

What of the transfer of wealth from cities to rural districts during the same periods? That was difficult to estimate because no information was available on the number of transfers of city property by inheritance. On the assumption that the proportion of non-farm estates as compared with farm estates was 162 per 100, as found in this study, there would have been about 700,000 transfers of non-farm property by inheritance during 1920–29 as compared with the estimated 431,000 transfers of farm property by inheritance. With an average transfer to rural heirs of $236 per city estate (Tables V and VI), a sum not to exceed $165,000,000 is thus estimated to have been moved from cities to farms during this period, whereas more than $1,000,000,000 moved from farms to cities.

No finality is claimed for these results, but it is felt that any weakness they may carry is attributable to the limitations of the sample rather than to the basic attack on the problem.

Composition of Farm Estates

Forms of property contained in farm and city estates gave evidence of the extent to which liquid assets could be used to pay debts and satisfy the rights of distant heirs. They also gave some indication of the forms in which people preserved part of their income and earnings for future use (Tables VIII and X).

Property in Ohio farm estates was found to be chiefly in farm lands. Two-thirds of the value of Franklin county and over 70% of the value of Madison county farm estates were in agricultural lands and improvements. Arizona farm estates contained less property in farm lands (Maricopa county, 38%, and Pima county, 20%), and more securities, large town and city property, more money, and more notes and mortgages. Taken together, the Arizona farm estates contained only a little less than ½ as much property in farm lands as the Ohio estates. The relatively large amount of town and city property in Arizona farm estates was only partly explained by the evident connections of some Arizona farm and ranch families with eastern city interests. Further explanation was found in the fact that many Arizona farm and ranch owners lived in cities and towns, such as Tucson, Phoenix, Glendale, or Mesa, either as retired owners or even as owner-operators of their farms.

The large amounts of notes and mortgages, bonds, and securities not only reflected eastern connections but also the strong tendency of a mobile population to invest in other property than farm lands. The higher percentage of money on hand or in the bank for Arizona's farm estates as compared with Ohio's was doubtless associated with the greater cash intake and output of Arizona's farm and ranch enterprises. Property in chattels made up between 4% and 5% of the value of farm estates in the Ohio counties and in Maricopa, as compared with more than 8% of the

TABLE VIII. FORMS OF PROPERTY IN FARM ESTATES*

Forms of Property	Distribution of Property in Farm Estates per $10,000 Valuation			
	Ohio		Arizona	
	Franklin (305 Estates)	Madison (101 Estates)	Maricopa (886 Estates)	Pima (261 Estates)
Farm real estate	$6,649	$7,190	$3,834	$1,983
Small town real estate	445	152	92	35
Town and city real estate	282	268	1,295	2,307
Mining properties	0	0	88	25
Chattels	438	489	470	873
Money on hand in bank	362	263	978	1,339
Certificates of deposit	557	540	80	29
Notes and mortgages	416	486	1,129	869
U. S. bonds	463	346	65	150
Other securities	254	206	1,909	2,252
Other sums due	134	60	60	138
Total	10,000	10,000	10,000	10,000
Gross value of property	4,216,582	1,956,814	15,282,254	4,788,420
Net value of property	3,323,985	1,421,669	12,940,127	3,891,854
Average value per estate	10,898	14,076	14,605	14,911

* As shown by appraisers' statement in two Ohio and two Arizona counties, probate court records.

value of Pima county estates. This was explained by the large numbers of cattle on the ranch estates of Pima county, since cattle ranching is one of its basic industries.

Deductions for debts, expenses, and other items reduced the gross valuation of Ohio farm estates by about 23%. A little more than $1,400,000 was taken from the total valuation of over $6,000,000. Deductions from Arizona's farm estates were not so great. Maricopa county's farm estates were reduced by 15%, and Pima county estates by a little less than 20% (Table VIII). Probably the smaller percentages deducted from farm estates in Arizona may be explained in part at least by the greater proportions of liquid assets in these estates. In other words, Ohio farm estates, more largely composed of farm lands, suffered greater reductions from mortgage indebtedness than did Arizona's farm estates. Thus it would seem that no insuperable difficulties would prevent the transferring of farm units intact from one generation to another. This appeared to be particularly feasible in the case of Arizona estates since they contained liquid assets of from 30% to 40% of their value and deductions for debt were considerably smaller.

So far this study has proceeded as if prices of farm lands, securities, and other property in farm estates had remained fairly stable throughout the years. This, of course, has been far from the case. Farm lands were increasing in value to 1920, whereas securities did not reach their peak until 1929. Since the break in the price of land was not reflected in appraisers' reports until 1922 and 1923 (they evidently expected the price of farm lands to stage a recovery), the summarized statement of values of farm property was divided into two periods, the first ending with 1923 and the second taking up at that point (Table IX).

This comparison showed that in Franklin county farm land made up 72% during 1919–23 and 62% during 1924–32 of the value of farm estates. This decrease of 10% was accompanied by corresponding increases in small town property, certificates of deposit, notes, mortgages, and securities other than United States bonds.

Among Maricopa county's farm es-

tates the most notable change lay in the decreased importance of farm lands. In that county, farm estates contained farm lands to the extent of 57% during 1908–23 and only 33% during 1924–37. This change was accompanied by a 13% increase in the relative position of securities and by a 6% increase in small town property. Notes and mortgages made a 4% increase, whereas chattels fell off. On the other hand, Pima county's farm estates registered a small increase in the relative importance of farm and ranch lands.

Ohio farm estates, during 1924–32, still far exceeded those of Arizona in their proportions of farm lands held. On the other hand, the relatively large liquid assets of Arizona's farm estates may have been used to pay off urban heirs and preserve the farm property in the estates with little or no debt.

The composition of Arizona farm estates indicated a more even distribution of interests among Arizona's agricultural people than appeared to exist among Ohio farmers. This reflected the non-agricultural background of many Arizona farm and ranch operators, as well as the more flexible outlook characteristic of a relatively new state.

Composition of City Estates

Columbus, Ohio, estates were analyzed to show the shares received by rural and urban heirs, but not their composition. City estates in Maricopa and Pima counties were found to be largely composed of city real estate, money, securities, and notes and mortgages. On the whole, Pima county's city estates represented the more conservative distribution of forms of property, 47% being in real property. Maricopa county's estates were somewhat smaller than Pima county's, the average being $7,577 and $8,067 respectively (Table X).

City estates were more liquid, containing larger proportions of money, securities, and notes and mortgages than did farm estates. Deductions for debts and expenses reduced the total valuation of Arizona's city estates included in this study about 13% on the average. As compared with farm estates in these counties, deductions from city estates were somewhat smaller (Table X).

As in the case of farm estates, it was

TABLE IX. FORMS OF PROPERTY IN FARM ESTATES: ONE OHIO AND TWO ARIZONA COUNTIES; TWO PERIODS COMPARED*

Forms of Property	Distribution of Property in Farm Estates per $10,000 Valuation					
	Franklin County		Maricopa County		Pima County	
	1919–1923 (104 Estates)	1924–1932 (201 Estates)	1908–1923 (221 Estates)	1924–1937 (665 Estates)	1908–1923 (132 Estates)	1924–1937 (129 Estates)
Farm real estate	$7,246	$6,234	$5,705	$3,338	$1,905	$2,024
Small town real estate	270	577	973	1,381	9	48
Town and city real estate	129	386	65	99	2,193	2,365
Mining properties	0	0	99	85	16	29
Chattels	495	395	779	389	1,552	528
Money on hand in bank	330	381	634	1,069	1,194	1,413
Certificates of deposit	376	685	43	90	62	13
Notes and mortgages	253	521	811	1,213	1,704	445
U. S. bonds	627	349	27	74	134	158
Other securities	146	335	750	2,042	1,019	2,877
Other sums due	128	137	114	221	212	100
Total	10,000	10,000	10,000	10,000	10,000	10,000

* Each period began with January 1 and ended with December 31 of the year as given.

necessary to take account of the influence of changing conditions upon the composition of city estates. This was accomplished by dividing the summaries of estates into two parts: (1) those settled prior to and including 1930 and (2) those settled between 1931 and 1937. The division was determined with reference to the 1929 collapse of the stock market. The assumptions were that the relative position of securities in city estates might have changed and that a comparison of estates settled before the end of 1930 with those settled afterward would possibly evidence such a change. The end of 1930 was selected to mark the division of the estate summaries, since generally at that time the appraisers' inventories began seriously to reflect the new market levels of securities.

TABLE X. FORMS OF PROPERTY IN CITY ESTATES*

Forms of Property	Distribution of Property in City Estates per $10,000 Valuation	
	Maricopa (1,522 Estates)	Pima (343 Estates)
City real estate	$2,967	$4,678
Small town real estate	219	28
Farm real estate	163	38
Mining properties	53	16
Chattels	349	443
Money on hand in bank	1,868	1,271
Certificates of deposit	48	30
Notes and mortgages	1,423	1,450
U.S. bonds	192	370
Other securities	2,617	1,512
Other sums due	101	164
Total	10,000	10,000
Gross value of property	13,144,935	3,244,906
Net value of property	11,532,661	2,766,920
Average value per estate	7,577	8,067

* As shown by appraisers' statements in two Arizona counties, probate court records. Study was also made of 333 Columbus, Ohio estates containing property having a net value of $3,275,000. This was not analyzed by forms of property but only as to the shares of the estates received by rural and urban heirs.

When thus divided, Maricopa city estates were found to have been composed of stocks and bonds, other than government bonds, to the extent of 27% during the earlier and 21% during the later period, whereas the proportion in city real estate decreased from 31% to 20%. Apparently the decline in real estate values more seriously affected the composition of estates than did decreased security values. The value of notes and mortgages amounted to 13% of the total value of estates during the earlier period but increased to 24% in the later period. This was the most significant increase among the forms of property contained in Maricopa city estates (Table XI).

TABLE XI. FORMS OF PROPERTY IN CITY ESTATES:* TWO PERIODS COMPARED

Forms of Property	Distribution of Property in City Estates per $10,000 Valuation			
	Maricopa County		Pima County	
	1908–1930 (1,096 Estates)	1931–1937 (426 Estates)	1927–1930 (127 Estates)	1931–1937 (216 Estates)
City real estate	$3,116	$2,006	$5,386	$4,136
Small town real estate	199	351	1	49
Town real estate	169	124	67	16
Mining properties	58	18	28	7
Chattels	314	569	458	431
Money on hand in bank	1,867	1,873	1,108	1,396
Certificates of deposit	50	37	0	54
Notes and mortgages	1,272	2,399	1,160	1,673
U. S. bonds	163	381	644	160
Other securities	2,668	2,124	1,027	1,881
Other sums due	124	118	121	197
Total	10,000	10,000	10,000	10,000

* Two Arizona counties, two periods compared. Each period began with January 1 and ended with December 31 of the year as given.

Pima city estates contained larger percentages of stocks and bonds, other than United States bonds, and of notes, mortgages, and money during the later period. As with Maricopa county urban estates, the decline in city real estate values was registered in a decrease of more than 10% (Table XI).

Thus the decline in values of stocks and bonds did not so greatly affect the proportions of different forms of property in Maricopa county's city estates as did the downward changes in city real estate. Pima county's city estates contained larger proportions of stocks and

bonds during the later period than in the earlier, whereas the percentage of city real estate decreased. Pima county city estates, however, still contained over 40% city real estate, while money, notes and mortgages, stocks and bonds combined made up a little more than 50% of the total value of these estates during the later period.

By and large, farm estates were almost double the size of city estates in average value. They contained larger proportions of real estate and of chattels than did city estates, and smaller proportions of money and of United States bonds and other securities. As a whole, both farm and city estates contained smaller proportions of real estate and more notes and mortgages, bonds, and other securities during recent years than formerly.

Some Practical Implications

It seemed probable that the material gathered in this study would have practical value to investors such as mortgage lenders, insurance companies, and trust departments of banks. The following points seemed worthy of special notice.

1. A definite relation exists between the value of estates and the percentage of real property they contain. Farm estates, on the whole, averaged almost twice the value of city estates and they contained a great deal more real property. The superior value of farm estates was very largely attributable to the greater accumulation of real property, for the value of notes, mortgages, stocks, and bonds was much more nearly the same in urban and rural estates. Although city property holders probably left to their heirs greater values in life insurance policies than did farm property holders (probate court records show no information on this point), it is most likely that their total accumulations did not anywhere near equal the accumulations of farm property holders. Apparently the ownership of real property, in comparison with other forms of property, favored accumulation.

2. Evidence pointed toward a growing desire for relatively liquid property in recent years. Percentages of value in real property in both farm and city estates has decreased since the beginning of the 30's. Since that time estates have contained larger percentages of notes and mortgages, much of their security being real property, and of stocks and bonds, as well as ready cash. This probably was a reflection of urban influence and it doubtless was an indicator of the shift that was taking place in the philosophy of the American people, a shift from the ideas of thrift and accumulation characteristic of the American middle class to the notion of spending that has more recently come into vogue. Investors would do well to advise their clients concerning private spending and private thrift and economy, a practice which might lay new foundations for a sounder public opinion on public spending and public thrift.

3. Farm mortgage lenders should be interested to know the extent to which the income derived from farming has been diverted from agriculture and from rural communities to meet obligations owed to city-dwelling claimants. Sums thus received by heirs have doubtless often been frittered away, literally lost to both farm and city. It is possible that there needs be developed a farm family way of preparing the children for their respective careers without saddling the heir who takes over the farm with an unduly heavy burden.[12] Without question such a development would increase the chances of a successful outcome to mortgage indebtedness, both for the

[12] Horace Miner, "The French-Canadian Family Cycle," 3 *American Sociological Review* 700–8 (October, 1938).

farm operator and the mortgage holder. Not only the farming industry but farm homes, local institutions, and communities could well profit from the added support that might be available by stopping some of the leaks that drain agriculture of its returns. It is now well known that the value of farm land depends in great part upon the vigor and adequacy of the community and its institutions as well as upon the location, fertility, and improvements that go with the land.

Conclusions

The conclusions drawn from the foregoing study are here tentatively stated in the hope that they will challenge further study of the flow of rights in property through inheritance, as it affects agriculture and agricultural population, and as it affects the people of our cities.

The first conclusion pertains to the movement of property rights from rural territory to urban and from urban territory to rural. It seems generally to be true that *the flow of rights in farm estates cityward on account of the migration of heirs of farm estates very greatly exceeds the flow of rights in city estates countryward which is attributable to the countermovement of heirs of city estates.* This net gain to cities is the product of the excess of cityward migration from farms, and the greater average value of the rights of heirs of farm estates that are located in cities as compared with that of heirs of city estates that are in rural territory. Although care should be taken to distinguish the return flow to cities of wealth that is essentially industrial in origin, analysis of the component parts of the stream of property rights carried by farm people to cities appears without question to support the conclusion of a vast net movement cityward of wealth that is agricultural in origin and location.

The second conclusion has to do with the distribution of heirs and of their property rights in relation to local and adjoining areas. Although our knowledge of the limited circulation of population[13] would have led to an expectation of the localization of heirs, *it remained to be found that rights in property were more extremely polarized in and about local areas than were the heirs who held these rights.* Heirs of equal rank but located far and near in space share, on an average, unequally in the estates, those in the local area receiving more than those more distantly removed. Thus, whereas heirs of near kinship generally receive more than heirs more remotely related, those of near kinship and spatially nearby usually receive the most. This is true of farm as well as of city estates. We may say, therefore, that *a spatial centralization of property operates through inheritance and exceeds its spatial dissipation on account of migration.*

A third conclusion points to a definite *tendency for rights in property that has been recently acquired and at some distance from the family's more permanent location to flow back to the place of origin by inheritance.* Thus, in a bifocal pattern of family interest, the location of the more firmly established interests tends to attract property rights from the location of recent investments. Incidentally, this takes place through other channels besides inheritance. So it may be expected that, until time and sustained interest deepen the family ties to the new location, the older local area will to a certain extent feed upon the newer one. Pioneer areas thus yield fresh nourishment for the family in its older locale.

[13] C. E. Lively, "Spatial Mobility of the Rural Population with Respect to Local Areas," 43 *American Journal of Sociology* 89 (July, 1937).

II. Shall Going Value Be Included in the Rate-Base?*

By IRSTON R. BARNES†

THE first installment of this article set forth the nature of going value and its component parts, together with a discussion of the various methods of measuring going value. It remains here to consider how allowances for going value have fared in rate cases, with particular reference to the attitude of the United States Supreme Court toward such allowances.

The Economic and Legal Status of Going Value in Rate Cases

Certain warnings should precede any discussion of the position of going value in the rate-base. It must be noted that, although the commissions may consider the question largely on an economic basis (at least such should be the basis for their considerations) the courts are only concerned with the question of confiscation. Thus the statements of the courts with respect to going value constitute decision, in contrast to dicta, only where an allowance for going value is required when such has been disregarded by the commission or where an increase is directed in what is considered an inadequate allowance. In the majority of rate cases, the courts simply accept the findings of the commission with nothing to indicate whether the allowance is excessive. It is essential to distinguish between going value for purposes of condemnation or purchase, where earning power may enter into the calculation, and going value as a part of the base for the regulation of rates.[15]

Also it must be recognized that the question of the appropriate allowance for going value is intimately bound up with problems of evidence—what measures of going value are acceptable to commissions and courts? Thus far, no device proposed for the measurement of going value has escaped the condemnation of the Supreme Court. Finally, of fundamental concern with respect to the status of going value is the answer to the question whether going value is to be independently recognized and given a separate allowance or whether going value is inherent in (a characteristic of) the physical property and hence adequately recognized in the valuation of that property.

Commission practice with respect to going value has been largely influenced by considerations of legal expediency. Until the Los Angeles and Dayton decisions in 1933 and 1934, a desire to avoid criticism by the courts, rather than conviction, led a majority of the public service commissions to make separate allowances for going value, in addition to valuing the physical properties as part of a going concern.[16] The allowance of a conventional percentage—10% has been the vogue, with occasional allowances of less than 5% or more than 20%—avoided the intricacies of resolving each case on its own facts; indeed, so well established was the practice of making an allowance that there were instances of separate al-

* For Part I, see 16 *Journal of Land & Public Utility Economics* 286–93 (August, 1940). Footnotes are numbered consecutively with those in the first installment.

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[15] *Omaha v. Omaha Water Co.*, 218 U. S. 180, 202–3 (1910); *Galveston Elec. Co. v. Galveston*, *supra* n. 8 at 397.

[16] In some states, allowances for going value have been required by the statutes under which the commissions regulate.

lowances without sufficient testimony to establish the existence of any such element of value or cost.[17]

Assuming the commission to be free to adopt whatever policy seems economically sound in its treatment of going value, what are the alternatives among which the commission may choose? The commission's immediate responsibility is the maintenance of the continuing financial health of the utility, at least if that is possible without prejudice to the rights of consumers; its ultimate responsibility is the assurance of satisfactory service and reasonable rates, not only in the present, but for the future as well. To the extent that going value is limited to authentic costs imposed on the corporation, investors are justified in expecting that these costs will enter into the determination of their rights to income. Four alternatives are theoretically open to the commission: (1) the commission may simply value the assets of the corporation as part of the integrated property of an established and going concern, without any separate or specific allowance for going value; (2) the costs involved in the creation of an efficient operating organization and the attraction of patronage may be recognized as proper charges to capital and permanently included in the rate-base; (3) the costs properly associated with going value may be amortized subsequent to the development period from earnings in excess of those that would otherwise be considered a fair return; or (4) a rate of return may be established which is commensurate with the risks confronting utility investments, including the risk of an adequate return in the development period. Each of these alternatives may be analyzed briefly.

1. In determining the rate-base, commissions have always valued the separate physical assets of the utility as parts of an established and going enterprise. If going value be considered as an inherent characteristic of the going business, rather than as something separate from, and in addition to, the physical assets of that business, this method of recognizing going value appears logical. In its valuation work, the Interstate Commerce Commission has consistently declined to make any separate allowance for going value, holding that sufficient recognition was afforded this element "in the method of valuation employed"; that is, the physical assets were valued as parts of the property of an established and operating railroad.[18] And, as will be argued later, there is reason to believe that this is the method favored by the Supreme Court.

2. Separate allowance for going value as an addition to the value of the physical assets is the method which accords with the wishes of the utility industry. This is the method which was followed until 1933 by a majority of the commissions, without, however, any assurance that their allowances were closely related to the actual or reasonable costs of development for the particular utility whose rates were being regulated. If this method should be adopted, the allowance for going value should not exceed the proven historical cost of developing the business, and some assurance should be given that there would be no capitalization of costs previously charged to operating expenses and paid by consumers. Also, there is the danger that in thus virtually guaranteeing the utility a fair return from the inauguration of the enterprise,

[17] A tabulation of early commission allowances may be found in *Re Mountain States Tel. & Tel. Co.*, P.U.R. 1923 B 352, 366–7 (N.M., 1923) and *Re Indianapolis Water Co.*, *supra* n. 3 at 502–3.

[18] In thus appraising the property of the railroads, the Commission contended that it had complied with the precedents established by the Supreme Court. *Texas Midland R.*, 75 I.C.C. 1, 69–71 (1918); *San Pedro, Los Angeles & Salt Lake R.*, 75 I.C.C. 463, 510–2 (1923).

there will be a subsidization of inefficiency and incompetence in management. Hence, as a further safeguard against the imposition of unwarranted burdens on consumers, the utility should be required to establish indubitably that the costs claimed for the developmental period reflect the maximum obtainable efficiency in management.

Despite the fact that the majority of commissions have chosen to recognize going value, or development costs, in this way, it may be asserted that this alternative is the least defensible of the four listed above. The disadvantages inherent in this method are not confined to the possibilities that consumers may be asked to provide a return upon expenditures which they have already paid. There is also the certainty that the ledger value of the utility assets, and often the par value of outstanding securities as well, will be excessive in relation to the investment in real earning assets. The credit of the utility would be improved, except in so far as the recognition of going value may give the company an apparent legal right to the exaction of larger charges from consumers, by adherence to more conservative standards of accounting and finance. Moreover, many of the costs that are sometimes included among the development expenses are recurrent in their nature, and the charging of such costs to capital account, especially if the developmental period be extended, would cause further inflation of capitalization.

3. Amortization of development costs or early losses out of subsequent earnings is the method followed by unregulated enterprises. Indeed, common corporate practice avoids charging such expenditures to capital account even temporarily; the larger returns that are sometimes realized if the corporation is successful are considered a sufficient compensation for the risks of inadequate earnings in the developmental period. The same policy is available to utility corporations if regulation is not so strict that earnings in excess of a fair return are never realized. Since most regulation is relatively intermittent in its operation, it is probably true that most successful utilities have found opportunity to pay dividends sufficient to offset any inadequacies in early earnings. Where such is not the case, there would certainly be no objection to a deliberate policy of permitting the company somewhat more than a fair return until such early deficiencies have been compensated for. The policy of amortization of development costs could presumably avoid imposing upon subsequent consumers rates higher than would otherwise be authorized, though it might mean the postponement of maximum reductions when liberal earnings appear. A further advantage of an amortization program would be the preservation of a more conservative relation between the investment in earning assets and the capitalization of the corporation.[19] The amortization of going value would also hold out the possibility of future rate reductions, a possibility that would be conducive to more favorable public relations between the utility and its patrons. Though amortization is to be preferred to a separate and additional allowance in the rate-base, it is less satisfactory than the next method to be considered.

4. The allowance of a rate of return commensurate with the risks encountered by the utility, including the risk of low earnings in the developmental peri-

[19] It would, of course, be possible to include going value in the rate-base without permitting the issuance of securities thereon; indeed, if going value be incorporated in the rate-base, it is quite desirable that it should not be the occasion for the issue of additional securities.

od, is the most appropriate means of compensating for those elements of cost which lend support to the claims for going value. The peculiar propriety of this method of treating going value cannot be fully appreciated without considering the determination of the rate of return. The rate of return is presumably so fixed as to permit the utility to earn a return "equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties."[20]

One of the normal risks of other business undertakings, as of utilities, is the possibility of inadequate earnings in the early years of the enterprise. These risks are inevitably recognized in the rate of return, both directly in considering the risks that beset the utility, and indirectly in the standard of comparison with other business undertakings. Since it is impossible to segregate these risks from others that influence the investment standing of a security, they must be included in fixing the rate of return. And to make allowance twice for the same elements of cost, in the rate-base and in the rate of return, is to indulge in double charging at the expense of the consumer. Thus, a larger rate of return should be (in fact, is) permitted as long as these risks are present; and when these risks disappear, the rate of return should be reduced. The disappearance of these risks will be evidenced by the smaller yields at which the utility's securities are sold. The conclusion is, therefore, that going value has no place in the rate-base of a utility; all relevant costs are adequately recompensed in the rate of return.

The sound policy for the commission to follow with respect to going value and the elements of costs associated therewith may be recapitulated as follows. The property of the utility should be valued as part of an established and successful going establishment, when such is the fact; but there should be no separate allowance for going value. Inasmuch as the rates established by commission order may permit the utility an income somewhat in excess of the fair return, it may be expected that the company will have opportunities to recoup for some of the early losses of the developmental period, though this is unnecessary. Although a deliberate policy of amortizing development costs is preferable to the capitalization of these items, this procedure is not so sound as confining all recognition of going value to the rate of return. The rate of return is so established as to afford investors a prospective return commensurate with the risks attending their investment. One of those risks is the possibility that the return may not be fully adequate in the early years of the undertaking. Since development costs have presumably been charged to operating expenses, and since any resulting inadequacy in earnings has been recognized in the rate of return, no separate allowance for going value in the rate-base is either necessary or proper.

The Supreme Court's Attitude toward Going Value

The pattern of Supreme Court decisions with respect to going-concern value and rate regulation is not free from inconsistencies, for the thought on the subject, as well as the personnel of the Court, has changed. The guiding principles are, however, reasonably clear and explicit. One caution should precede the examination of the Court's decisions pertaining to going value: the Court is called upon to decide questions only

[20] *Bluefield W. W. & Imp. Co. v. Com.*, 262 U. S. 679, 692 (1923).

when there is a controversy; if a commission has made some allowance for going value, the Court will not criticize that allowance on the ground that it is excessive; if a commission's allowance is challenged as inadequate, the matter comes before the Court; or if a commission's refusal to make a separate allowance is contested by a company, the treatment of going value is presented to the Court. In a substantial proportion of the rate cases that have been appealed to the courts, the commissions' allowances for going value have been so liberal that no contest over this item has developed.

As a preliminary to the consideration of the Court's decisions pertaining to going value, it may be pertinent to recall a remark in *The Minnesota Rate Cases* which, although not addressed to the subject of going value, is, nevertheless, particularly cogent in respect to the present analysis:

"It must be remembered that we are concerned with a charge of confiscation of property by the denial of a fair return for its use; and to determine the truth of the charge there is sought to be ascertained the present value of the property. The realization of the benefits of property must always depend in large degree on the ability and sagacity of those who employ it, but the appraisement is of an instrument of public service, as property, not of the skill of the users."[21]

The existence of going value has often been recognized by the Supreme Court in its review of utility valuations. In its most frequently quoted opinion, *Des Moines Gas Company* v. *Des Moines*, Mr. Justice Day stated:

" . . . 'Going value,' or 'going concern value,' i.e., the value which inheres in a plant where its business is established, as distinguished from one which has yet to establish its business has been the subject of much discussion in rate-making cases before the courts and commissions. . . . That there is an element of value in an assembled and established plant, doing business and earning money, over one not thus advanced, is self-evident. This element of value is a property right, and should be considered in determining the value of the property, upon which the owner has a right to make a fair return when the same is privately owned although dedicated to public use. Each case must be controlled by its own circumstances, and the actual question here is: In view of the facts found, and the method of valuation used by him, did the Master sufficiently include this element in determining the value of the property of this Company for rate-making purposes?"[22]

The precise significance of this statement is not immediately apparent. Although frequently quoted in support of a separate allowance for going value in addition to the appraisal of physical property and overhead costs, the fact is that in the Des Moines case the Court did not require a separate and additional allowance for going value.[23] This recognition

[21] 230 U. S. 352, 458 (1913).

[22] *Supra* n. 4 at 164–5. See also *Knoxville v. Knoxville Water Co.*, 212 U. S. 1, 9 (1909); *Denver v. Denver Union Water Co.*, 246 U. S. 178, 191–2 (1918); *McCardle v. Indianapolis Water Co.*, 272 U. S. 400, 414–5 (1926).

[23] "Included in going value as usually reckoned is the investment necessary to organizing and establishing the business which is not embraced in the value of its actual physical property. In this case, what may be called the inception cost of the enterprise entering into the establishing of a going concern had long since been incurred. The present company and its predecessors had long carried on business in the City of Des Moines, under other ordinances, and at higher rates than the ordinance in question established. For aught that appears in this record, these expenses may have been already compensated in rates charged and collected under former ordinances. As we have said, every presumption is in favor of the legitimate exercise of the rate-making power, and it is not to be presumed, without proof, that a Company is under the necessity of making up losses and expenditures incidental to the experimental stage of its business.

"These items of expense in development are often called overhead charges, for which, as we have already seen, the Master allowed fifteen per cent upon the base value (exclusive of real estate), or $296,254, in addition to his allowance of $6,923 for organization expenses.

" . . . When, as here, a long established and successful plant of this character is valued for rate-making purposes, and the value of the property fixed as the Master certifies upon the basis of a plant in successful operation,

(*Footnote 23 continued on page 435*)

of going value may be interpreted, with due regard to the logic of the Des Moines case and other decisions of the Supreme Court, as requiring only that the commission "determine the value of the property . . . as that of an integrated, operating enterprise," and as holding that no further or additional sum for going value is necessary when the commission has valued the physical assets as parts of a going property with business attached and has made due allowances for overhead charges.[24]

There is, however, a widespread disposition to regard the Des Moines decision as authority for separate and additional allowances for going value in the rate-base. This position is predicated largely on the assertion that going value is a "property right," the implication being that all property and property rights belong in the rate-base. And there have been a number of decisions in which the Supreme Court has approved rate-bases including separate allowances for going value. In the Denver Water Company case, the Court noted that the master, although finding a going value of $800,000, had included no allowance therefore in his rate-base, despite the fact that he had expressly declared that the valuation of the physical property included no increment because the property constituted an assembled and established plant, and it ruled that the exclusion was erroneous.[25] In the next year, the Court criticized the reduction of an allowance for going value, the reduction having been based on the theory that the business had been developed at the public's expense, although there had been no finding that the past earnings of the company had been excessive.[26] In 1923, two cases were before the Supreme Court in which the commissions had allowed an item of 10% for going value; this fact was noted by the Court, but in neither instance was there any indication that that allowance influenced the Court's decision.[27] In *McCardle* v. *Indianapolis Water Company*, Mr. Justice Butler, speaking for the Court, held that the Commission had erred in its allowance for going value: in an earlier proceeding involving the same property, the Commission had included the sum of $1,416,000, amounting to 9.5% of the value of the physical property, for water rights and going value; in the instant proceeding, the Commission, without offering any explanation, allowed only $980,000 for working capital, water rights, and going value. The Court ruled that there was ample evidence to support the earlier allowance of 9.5%.[28] These are the only cases in which the necessity for a separate and additional allowance for going value is implied, and in only two instances did the Court affirmatively require that an additional separate allowance be made.

In the majority of cases the attempt of the utility to prove the existence and the amount of going value has been checked by the Court's objections to the valuation methods employed. No general formula for the determination of

(*Footnote 23 continued from page 434*)
and overhead charges have been allowed for the items and in the sums already stated, it cannot be said, in view of the facts in this case, that the element of going value has not been given the consideration it deserves and the appellant's contention in this behalf is not sustained." *Ibid.*, 165–6, 171.

[24] *Los Angeles G. & E. Corp. v. Com.*, *supra* n. 13 at 314.

[25] *Supra* n. 22 at 185–6, 191–2.

[26] *Lincoln G. & E. Co. v. Lincoln*, 250 U. S. 256, 267 (1919).

[27] *Georgia Ry. & P. Co. v. Com.*, 262 U. S. 625, 632 (1923); *Bluefield W. W. & Imp. Co. v. Com.*, *supra* n. 20 at 692.

[28] *Supra*, n. 22 at 414. Mr. Justice Butler cited many cases in support of his ruling, but their relevance to the matter at issue is not discoverable. See, Whitten and Wilcox, *Valuation of Public Service Corporations* (New York: Banks Law Publishing Co., 1928), Vol. 2, §749, pp. 1386–1418.

going value has received the approval of the Court; each claim for going value has been decided on its own facts.[29] The perfunctory reading of going value into every balance sheet has been unequivocally condemned.[30] In principle, good will has been consistently distinguished from going value and excluded from the rate-base, but the practical difficulties in separating going value from good will have constituted an additional hazard to securing judicial approval of any measure of going value.[31] Past prosperity does not create going value;[32] nor are past losses, or so-called development costs, acceptable as a measure of going value.[33] The use of reproduction-cost estimates has failed to win approval,[34] and the infirmities of expert testimony have been duly emphasized.[35]

With all the proposed methods of valuation rejected as unacceptable, it is difficult to see how any separate and additional allowance for going value can find a place in a rate-base for the purpose of testing the confiscatory character of rates. Thus it is unlikely that the Supreme Court would overrule a commission for failure to make a separate allowance for going value when it has itself ruled against all of the means by which the amount of such separate allowance might be determined. It is, therefore, reasonable to conclude that in valuations for rate-making purposes, going value need not be included as an element of value, in addition to the allowance for physical property and overheads.

In the majority of cases, and in all of the recent ones, in which going value has been an issue, the Supreme Court has adhered to the position that no separate allowance for going value is requisite.[36] Ample recognition of going value for purposes of determining the rate-base is afforded when the physical property of the utility is valued as part of an established and successful enterprise, with allowance for such overhead costs as appear appropriate in the circumstances of the particular case. That such is the present position of the Supreme Court may be seen by reference to excerpts from three recent decisions:

" . . . Here the company was a small one and its organization simple. There was no diversified and complex business with ramifying subdivisions. We cannot in fairness say that after valuing the assets upon the basis of a plant in successful operation, there was left an element of going value to be added to the total. Even if the addition might have been made without departure from accepted principles, the omission to make it does not appear to have been so unreasonable or arbitrary as to overleap discretion and reach the zone of confiscation."[37]

" . . . The Secretary recognized the fact that there is an element of value in an 'established plant doing business and earning money over one not thus advanced.' But he thought that in the rate base he had fixed there was an adequate allowance for that element and that it was 'inextricably inter-

[29] *Des Moines G. Co. v. Des Moines*, *supra* n. 4 at 164–5; *Denver v. Denver Water Co.*, *supra* n. 22 at 191–2; *Houston v. Southwestern Bell Tel. Co.*, 259 U. S. 318, 324–5 (1922); *Los Angeles G. & E. Corp. v. Com.*, *supra* n. 13 at 315.

[30] *Dayton P. & L. Co. v. Com.*, 292 U. S. 290, 309 (1934).

[31] *Willcox v. Consol. G. Co.*, 212 U. S. 19, 52 (1909); *Des Moines G. Co. v. Des Moines*, *supra* n. 4 at 164–5; *Cedar Rapids G. L. Co. v. Cedar Rapids*, 223 U. S. 655, 669–70 (1912); *Galveston E. Co. v. Galveston*, *supra* n. 8 at 396.

[32] *Des Moines G. Co. v. Des Moines*, *supra* n. 4 at 171.

[33] *Galveston E. Co. v. Galveston*, *supra* n. 8 at 393–5; *Southwestern Bell Tel. Co. v. Com.*, *supra* n. 9 at 288; *Georgia Ry. & P. Co. v. Com.*, *supra* n. 27 at 632; *Board of Commrs. v. N. Y. Tel. Co.*, 271 U. S. 23, 31–2 (1926).

[34] *Columbus G. & F. Co. v. Com.*, 292 U. S. 398, 412–3 (1934); *St. Joseph Stock Yards Co. v. U. S.*, *supra* n. 12 at 62–3.

[35] *Los Angeles G. & E. Corp. v. Com.*, *supra* n. 13 at 317–9; *Columbus G. & F. Co. v. Com.*, *supra* n. 34 at 412–3.

[36] *Des Moines G. Co. v. Des Moines*, *supra* n. 4 at 171; *I.C.C. v. New York, N. H. & H. R. Co.*, 287 U. S. 178, 191 (1932); *Los Angeles G. & E. Corp. v. Com.*, *supra* n. 13 at 313–9; *Columbus G. & F. Co. v. Com.*, *supra* n. 34 at 412–3.

[37] *Dayton P. & L. Co. v. Com.*, *supra* n. 30 at 309.

woven with other values.' The Government's argument in support of this view points to the overheads allowed and emphasizes the fact that the Secretary's method took as his basis reproduction cost 'unmodified by considerations of actual or historical cost.' It is urged that the Secretary in fact made a liberal valuation which gave a margin large enough to cover the value inherent in a going concern."[38]

"The substance of appellant's claim is that these figures are exclusively attributable to physical elements. Assuming that to be true, it does not follow that the Secretary failed to include proper allowance for going concern. . . . The value of appellant's property used in stockyard services is single in substance . . . . While it may be considered as made up of tangible and intangible elements, it is not necessarily to be appraised by adding to cost figures attributable to mere physical plant something to cover the value of the business. . . . Appellant's plant without business, present or prospective, would be worth much less than the cost figures found by the Secretary to represent value. Appellant's claim, that the rate base includes nothing on account of going concern value, is without foundation in fact."[39]

Has the Supreme Court recognized development costs as entitled to any consideration in the regulation of utility rates and charges? The Court has not stated explicitly that an allowance for development costs or for the risks of an inadequate return in the early years of operation is included in the rate of return, but that this factor is implicit in the determination of the fair rate of return is apparent. This conclusion finds support in Mr. Justice Brandeis' statement in the Galveston Electric case:

"The fact that a utility may reach financial success only in time or not at all, is a reason for allowing a liberal return on the money invested in the enterprise; but it does not make past losses an element to be considered in deciding what the base value is and whether the rate is confiscatory."[40]

The consideration of going value and its role in rate regulation leads to only one conclusion—that no separate and specific allowance for going value should enter into the rate-base. The controlling legal precedents are those of the Supreme Court. An examination of the decisions of the Court, especially those of more recent date, indicates clearly that legal precedents constitute no obstacle to disposing of the question of going value according to sound administrative and economic principles. From the administrative point of view, the most compelling reason for dropping going value as a specific intangible value is the fact that years of regulatory effort have failed to develop a satisfactory measure of this element of value.

The more fundamental reason for excluding going value from the rate-base is that its presence therein conflicts with controlling economic principles. Going value as an element of "value" depends upon the earnings of the utility; hence its inclusion in the rate-base is inconsistent with the basic principles of rate regulation, involving circular reasoning without a possibility of arriving at an independent measure of this "value." As an element of "cost," the claim for consideration of going value only appears to rest on more logical grounds. The "cost" is imposed by the risk of an inadequate return during the early years of the company's existence. But this "cost" is always and inevitably a factor influencing the cost of capital and is thus reflected in the rate of return. Any addition of going value to the rate-base constitutes a duplication of a "cost" that has already been paid. Administrative expediency has tended to exclude going value from the rate-base; on grounds of principle, going value has no place in a valuation for rate regulation.

[38] *St. Joseph Stock Yards Co. v. U. S.*, *supra* n. 12 at 64.

[39] *Denver Stock Yard Co. v. U. S.*, 304 U. S. 470, 479 (1938).

[40] *Supra* n. 8 at 395.

The Rural Zoning Ordinance of Cook County

By ARTHUR G. ERDMANN*

AT LAST the home owner may venture into certain unincorporated areas of the Chicago metropolitan region with reasonable assurance that the value and livability of his home will not be impaired or practically ruined by the encroachment of unwisely located or indiscriminate subdivision, business or industrial "improvements" which he could not foresee when he built and which he had no power to prevent.

Rural zoning ordinances for the property owner's protection have been adopted by the counties of DuPage, Kane, Lake, and Kendall, in the order mentioned, and in this foresighted group is now found the County of Cook, which on August 20, 1940 adopted the first complete zoning ordinance ever devised to regulate the uses of the county's unincorporated areas. These areas embrace over 500 square miles, or more than ½ of the 933 square miles within the boundaries of the county, and have an estimated population of 40,000 to 50,000.

The spread of the county zoning idea is credited to the Chicago Regional Planning Association. The demand for immediate action on this matter is said to have arisen from fears in a number of suburban towns that the financing of low-priced homes under Title I, Class 3, of the National Housing Act would result in detrimental building on or near their borders. The maximum loan of this class under the provision of the act is limited to $2,500, and as this usually represents the cost of the home, it was mistakenly believed that these communities would suffer from proximity to subdivisions filled with shacks. Protests from several communities were made to the Federal Housing Administration but eventually the builders in these areas were allowed to proceed with the construction of Title I, Class 3, homes. One of Cook County's leading savings and loan associations undertook practically all of this financing and it was soon found that the restrictions on both land and buildings which this association set up in making its loans were highly effective in preventing unsightly, dangerous, and nuisance building. Attractive communities of artistically designed and well built homes were created, sanitation was good, and in all instances in keeping with the rules and regulations of the local or state health authorities, and the families were outstandingly of American stock. Now practically all Title I, Class 3, financing has been switched to the modified Title II lending plan, with its more rigid subdivision requirements, and all is again quiet on these fronts. But the battle had the highly salutary effect of focusing attention on the necessity for rural zoning to protect communities throughout Cook County against unrestricted subdivision activity.

To meet this demand and to protect all communities in the county, numbering about 90, against developments along their borders incompatible with their character, Clayton F. Smith, president of the Board of Commissioners of Cook County, acting under authority granted by the legislature in 1935,[1] in June, 1939, named a zoning commission to draw up the ordinance and appointed Robert Kingery, general manager of

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[1] See Helen C. Monchow, "County Zoning Authorized in Illinois," 12 *Journal of Land & Public Utility Economics* 89–90 (February, 1936).

the Chicago Regional Planning Association, as its chairman. The commission made a study of the location, uses, and potential developments of the unincorporated land in the county, including everything from hot dog stands, dog kennels, chicken yards, pony rides, and auto junk yards to the largest and heaviest industries. Conferences with suburban officials, real estate and other business men and public hearings were held in each of the 25 townships. To provide a comprehensive visual record for the study of all natural and man-made conditions surrounding every community, such as farm lands, forest preserves, lakes, rivers, railroads, highways, and industries, an aerial survey was made of the county, thus making possible broader and more dependable planning and decisions. An interim ordinance was passed by the board on March 4, 1940 and administered during the period of preparation.[2]

Purposes of the Ordinance

The ordinance is intended to conserve property values and assure the proper development of all land in Cook County outside the limits of cities, villages, and incorporated towns. No doubt the most comprehensive statement of its purposes is found in its preamble, which is as follows:

"An ordinance requiring permits for buildings, structures and the uses thereof, for land uses and for water supply and sewage disposal facilities, dividing the county into districts, regulating the uses permitted in such district, specifying minimum plat sizes, set backs and side yards, and maximum building heights near airports or landing fields, requiring approved water supply and sewage disposal facilities and parking areas, providing for appeals, and imposing penalties.

"For the purpose of promoting the public health, safety, morals, comfort and general welfare, conserving the values of property throughout the county and lessening or avoiding congestion in the public streets and highways, and pursuant to 'An Act in Relation to County Zoning' passed by the General Assembly of the State of Illinois and approved June 28, 1935."

The Zoning Districts

All land outside limits of cities, villages, and incorporated towns is divided into districts of the following order from the highest class to the lowest:

R-1—Residence, 5 acres, 300 feet average width
R-2—Residence, 40,000 square feet, 150 feet width
R-3—Residence, 20,000 square feet, 100 feet width
R-4—Residence, 10,000 square feet, 60 feet width
F —Farming
B-1—Business, including stores, apartment buildings, hotels, tourist camps, billboards, etc.
B-2—Business, tavern and amusement
I-1—Industry, light
I-2—Industry, heavy
I-3—Industry, unrestricted

The boundaries of these districts are shown on the zoning plat comprising 23 pages, which is an essential part of the ordinance.

Acreage Allowances for Each District

Cook County has a total area of 597,000 acres. The zoning ordinance applies only to the 321,542 acres of unincorporated land lying outside its municipal areas. The application of the ordinance divides this as follows:

Use	No. of Classes	Acres	Per Cent
Residential	4	62,577	19.5%
Farming	1	247,708	77.0
Business	2	1,188	0.4
Industry	3	10,069	3.1
Total	—	321,542	100.0%

[2] See Robert Kingery, "Cook County Amends Rural Subdivision Regulations," 16 *Ibid.* 218–9 (May, 1940).

The allotment of space to business is 1,188 acres, which is approximately 230,000 front feet. This frontage includes the existing rural business development of 90,000 front feet. This permits a 150% business expansion or an increase to 2½ times the present amount of used business frontage. Almost ½ of the total business area, or 526 acres, is opened for saloon operation and to other less restricted commercial uses, such as dance halls and noisy or brightly lighted amusement devices. Billboards are defined as a business use of land and restricted to business and industrial districts. Thus residential and farm zones are protected from further inroads of this nature, a fact gratifying to the organizations which have fought for preservation of the natural beauties of our landscape. Industry also is allowed space for a reasonable increase but not an excessive amount above the present occupied industrial area of 3,200 acres. Special arrangements are made for airports and landing areas, approximately 150,000 acres being labeled as possible airport areas, or about ¼ of the entire county. A tract of 160 acres is the minimum airport area. Each port must have three runways not less than 1,800 feet long, off-highway parking space, and be at least three miles from an existing port.

Important Provisions

To minimize the old sharp transition between residential and business frontage along the same street, the ordinance requires that business structures and residential buildings observe the same setback along streets and highways—that is, 80 feet from the center line of the highway. In residential and farm districts, buildings must have a side yard of at least 10% of the lot width. Provision is made for vehicle parking space off the public streets. Water supply and sewage disposal must conform to the standards of the State of Illinois Department of Public Health. Although agricultural uses are exempted from control by the enabling statute, a farm residence and its water supply must conform to the zoning standards. The principal regulations regarding non-conforming use provide that such uses may be continued but not changed to a lower use nor expanded nor reestablished if once discontinued.

A zoning board of appeals consisting of five members is provided for by the ordinance. Four of the five members of this board were appointed by President Smith on September 12, 1940—three of them from the personnel of the commission which drafted the ordinance, the fourth an experienced zoning attorney.

Merits of the Ordinance

Zoning is a plan adopted by legal process for the conservation of property values and for the proper development of unimproved or partially improved property. To be effective the plan must be right and the enforcement of the law must be just, energetic, and intelligent. The Cook County zoning ordinance contains within itself potentialities of great public and private benefit. It provides for the intelligent subdivision of land, puts a check on wildcat home building, which creates the rural slums of the future, gives protection against automobile "graveyards," dumps, unregulated use of billboards, and other nuisances, reduces or eliminates congestion, safeguards health, and keeps business within limits where it can best serve the community. The ordinance should help families moving outward to establish their homes without fear of depreciation caused by crowding or the encroachment of detrimental building.

The allocation of space to the various classifications appears to have been done intelligently. Criticism has been made that the assignment of approximately ½ of the business frontage to possible saloon and amusement types of uses was excessive but the board has explained that this is in conformity with the ratio of such areas to all business area under existing conditions. In this respect the ordinance does not seem to improve morals—one of its stated objects—or help business development. On the other hand, the allotment of space for the enlargement of business and industry seems reasonable. There appears on the surface no attempt to create fictitious values by zoning for business farm lands which in a century can never be anything but farm lands, or by zoning home sites for apartments or hotels where obviously there should never be anything but homes. On this point comparison with Chicago zoning will be enlightening.

Chicago zoning, with its ordinance passed as long ago as 1923, has been variously described as "haywire, cockeyed, ruinous, and super-colossal crazy." According to a real estate analyst, in Chicago's 211 square miles of area only 6.79 square miles are zoned for homes—slightly more than 3% of the entire area. In comparison with this, the Cook County zoning of 62,577 acres, or 19.5% of the entire area, for residential development seems the height of reasonableness. And of course one may always build his home on a farm and enjoy seclusion and security. As 77% of the Cook County rural area is zoned for farming, the area in the county on which one may build a home with safety is over 96% of the whole. In brief, in Chicago the safeguarded home area is 3% of the whole; in rural Cook County, 96%.

In fairness to Chicago it should be said that its zoning ordinance was written "way back when" zoning was an experiment and its legal standing by no means established. One of the duties of the newly created Chicago Plan Commission, appointed by Mayor Edward J. Kelly and headed by George T. Horton, is that of developing plans and recommendations for rezoning the city, and one of its important activities recently has been its supervision of the Land Use Survey and Real Property Inventory—a $2,500,000 project of the WPA, which will provide a scientific basis for the preparation of a framework or master plan which will include transportation, safer highways, parks and recreation centers, rezoning, housing, neighborhood improvement, slum clearance, rehabilitation, and general city improvement.

Careful analysis thus indicates that Cook County has a good zoning ordinance—an exceptionally good one. Some idea of its importance is found in a statement by Mr. Kingery, who said that in 1900 the Chicago region, consisting of three counties in Indiana, three in Wisconsin, and nine in Illinois, had only 28% of its population outside the city of Chicago. In 1930 it had 34%, and forecasts indicate that in 1960 it will have 40%. The future of this vast population is largely bound up with such zoning ordinances as have already been established.

The reaction to good zoning is immediate and increases as it becomes apparent that the ordinance will be rigidly enforced. In DuPage County, which adopted its ordinance in 1935, values of building construction in the rural areas have steadily increased in volume. In 1936, 300 permits were issued for residential, business, commercial, and industrial construction amounting to $437,702. In 1939, 871 permits were issued for building estimated at $1,324,531, nearly tripling the total for the first year of

operation under zoning. Kane County in 1938, its first zoning year, issued 64 permits for building amounting to $152,127 and in 1939 issued 164 permits totaling $536,061. In Chicago, wherever progressive business men and community leaders have gotten together and rezoned their sections sensibly, new homes in large numbers have gone up and business has improved. But the greatest and most visible proof of the value of good zoning is found in the suburban towns. Realistic zoning, in most cases intelligently and honestly enforced, has led thousands to build in these communities where the greater part of the area is occupied by homes protected by zoning.

Zoning—like liberty—must be fought for. The Constitution of the United States has protected our inalienable rights only so far as we have resisted aggression. This is true of the existing zoning ordinances and will be true of the Cook County ordinance just established. Some communities have suffered progressive deterioration as a result of chiseling at the zoning. In others, "minute men" are ready to fight zoning aggressions at the drop of the hat. And in one, River Forest, Illinois, a Home Zoning Association, established some years ago, comprises a thousand home owners who demand that their homes be protected and crowd the village hall when the zoning is attacked and a case comes to a hearing. More than one would-be rezoner has experienced faintness of heart at the sight of this determined citizenry, whose moral support gives the zoning appeal board and the village officials the courage to defend the zoning against unreasonable or harmful demands. So will it be with the Cook County rural zoning. If the board of appeals, which has broad powers in interpreting the ordinance, upholds the fundamental purposes of this legislation, if the county commissioners want their ordinance to work and not serve real estate racketeering, and if the people give the ordinance their loyal support, the benefits of zoning to Cook County and to this and future generations should prove incalculably great.

A Review of Railroad Financing, 1920-1938:

III. Funds for Capital Purposes

By LORING C. FARWELL*

TWO previous articles[30] have appeared in the *Journal* under the general title used here. These contained discussions of the volume of new railroad securities issued from May, 1920 through December, 1938, quantitative analyses of the cost of borrowed capital and of the classes of its lenders, and certain qualitative aspects of this financing. In the present article the sources and results of this financing will be discussed more fully, with emphasis on capital acquisitions and their implications for the railroad industry and its future.[31]

The essential problem is to determine the sources of funds known to have been allocated to investment in the assets of railroad companies during the period under review. In rough form, the overall contributions from the combined sources and the division of these contributions among certain major groups of sources is suggested by the following data: the railroads increased their investment in road and equipment $4.9 billions between December 31, 1920 and December 31, 1938;[32] the amount of securities outstanding in the hands of the public increased $1.0 billion[33] and was associated with at least $12.4 billions of new security issues;[34] and the railroads spent $10.7 billions for capital purposes.[35] Analysis of the expenditures for capital purposes shows that a negligible amount was spent on non-operating assets, that sinking funds and deposits in lieu of mortgaged property which had been sold declined, that $.8 billions were absorbed in the increases of working capital in various years, and that the remainder ($9.9 billions) was used for investment in road and equipment. A breakdown of this latter figure reveals that 2% was absorbed by changes associated with the sale or consolidation of properties or miscellaneous adjustments of the property accounts; 43%, by retirements; and 55%, by net additions to existing investment.[36] In this article, an attempt will be

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[30] Herbert E. Dougall and Loring C. Farwell, "A Review of Railroad Financing, 1920–1938: I. Volume and Cost of Railroad Capital," 16 *Journal of Land & Public Utility Economics* 207–13 (May, 1940) and "II. Types and Methods of Financing," *Ibid.*, 306–17 (August, 1940). Tables and notes are numbered consecutively with those in the earlier articles.

[31] The author desires to acknowledge his indebtedness: first, to Professor Herbert E. Dougall, under whose advisorship the data were originally analyzed in the course of preparing a thesis in the School of Commerce at Northwestern University; and second to Mr. John W. Barriger, III, who had used these same data, made most of the necessary computations, and submitted the results as part of his testimony on this subject before the Temporary National Economic Committee. (See "Sources of Railway Capital, 1921–37," *Investigation of the Concentration of Economic Power*, Part 9, Washington, D. C., TNEC, 1940, pp. 3561–76 and 4019–26.) Mr. Barriger's data covered the years 1921–37 and the author was able to complete them for the full period by reference to the footnotes to the published tables.

[32] ICC, *Statistics of Railroads in the U. S.*, 1938, Table 155, S-142. Includes Class I, II, and III roads and their lessor companies; excludes investment of proprietory companies.

[33] *Ibid.*, Table 155, S-142. Includes Class I, II, III roads and their lessor companies.

[34] Dougall and Farwell, *op. cit.*, Part I, Table I, p. 208, and Part II, p. 311.

[35] Barriger, *op. cit.*, Exhibits 566 and 567, pp. 4025–6. Includes Class I roads and their lessor companies only.

[36] Fifty-five per cent of $9.9 billions is $5.4 billions. This differs from the figure of $4.9 billions given earlier in the text. The difference arises from differences in the number of roads included in the data from which these figures were drawn and shows, strangely enough, that the increase in investment in road and equipment of all railroads was smaller than that for Class I roads and their lessor companies alone.

made to measure the amounts contributed by each source to the aggregate amount of $10.7 billions, to examine the difference between the increase in investment in road and equipment and the increase in securities outstanding in the hands of the public, to refine the relationship between security issues and the increase in securities outstanding, and to draw conclusions with respect to the probable future importance of these sources.

"Sources of funds" are defined as those persons or activities contributing cash or assets in lieu of cash retained by the business. The general definition of a "source of funds" would not be limited to funds "retained by the business," but the qualification is made here in order to exclude the analysis of expenses, interest payments, or dividends. It will be assumed that an action which supplies industries with assets for which no cash was paid but which would otherwise have been purchased for cash is a source of funds. The transfer of funds from one company to another—i.e., investment in affiliates—is automatically excluded because the industry is considered an entity. The sources to be measured include: sale of securities, reserves for depreciation and retirement, undistributed earnings, miscellaneous adjustments of profits representing deferred income or windfall gains, funded debt matured unpaid, and working capital decreases.

The reasons for including the latter two items should be made clear at this point. The logic of calling working capital decreases a source of funds is quite straightforward but requires explanation. Working capital is an excess of funds supplied by one or more of the sources listed above (excluding working capital decreases) over the funds applied to investment in fixed assets during past periods. When, in the period under discussion, working capital is decreased, funds are released. The term "source" is applied to this act simply because it is impossible to designate the actual source or sources which originally provided the funds.

The logic of including default in payment of principal of matured debt may be supported by a slightly different line of reasoning. Unpaid matured debt is in substance an involuntary contribution of creditors. The act of default may be presumed to release the cash which has been accumulated in anticipation of the maturity requirement of the debt and to relieve the company of the necessity for finding some other source of funds to supply additional cash. The amount of funds already on hand may be quite sizable. Default will occur as long as the cash on hand is insufficient to make payment of the obligation feasible or to provide grounds for forced payment through suit for specific performance. The release from the necessity of finding a source for the additional funds has the net effect of increasing the apparent flow from other sources.

VII. The Methods of Measurement

The first group of accounts to be considered are those under the general title "Credit Obligations" and the funds obtained will be measured by: the sum of the changes in any given year or group of years in the amounts of funded debt outstanding in the hands of the public, funded debt matured unpaid, and outstanding receivers' or trustees' certificates. Funded debt outstanding in the hands of the public at any given moment is the amount of funded debt, including nominally issued and nominally outstanding debt, shown on the books of the companies less the amounts of funded debt owned by the railroads themselves. Data on funded debt changes are pre-

sented for Class I, II, and III roads and their lessor companies.

Funds secured from "stock" financing are directly equal to the change in outstanding stock, preferred and common, in the hands of the public. Here also, "in the hands of the public" means the total, including the nominally issued and nominally outstanding stock, less that owned by railroad companies. Class I, II, and III roads and their lessor companies are included in the measurement.

The four sub-classes under the general heading, "Income," demand separate description. "Depreciation and Retirement" is the sum of the amounts charged for depreciation of road and equipment, and for those retirements which are considered operating expense, plus the change[37] in the amount of the reserve for depreciation of non-operating physical properties. "Undistributed Earnings" includes net income, the change in the interest matured unpaid, and a deduction for dividends (excepting stock dividends) paid. "Income from This and Other Years" is made up of three accounts: miscellaneous credits to profit and loss, deferred income credits, and profit from sale of road or equipment. "Donations" are taken directly from the account of that name. Only Class I roads and their lessor companies are covered.

"Working Capital Decreases" and the comparable "Increases" reflect the annual changes in working capital, which has been adjusted by excluding interest matured and unpaid and funded debt matured unpaid from, and by adding tax liabilities to, the current liabilities ordinarily shown under the ICC classification of accounts. Only Class I roads and their lessor companies have been included.[38]

A word of explanation is desirable concerning the inclusion of funds secured by default of principal in the "Credit Obligation" group and funds secured by default of interest in the "Undistributed Earnings" group. A fundamental difference exists between the type of financial action involved in default and that involved in securing funds through the other accounts included in these groups. This difference should be kept in mind, and it will be a factor in later regroupings of the accounts.

A question of error is involved in the assumption underlying the selection of accounts measuring the funds derived by the change in funded debt and in stock outstanding in the hands of the public. In so far as the book value of the consideration received and the book value of the securities sold differ, error is introduced. In the sale of new issues of bonds and par-value stock, this difference is not likely to occur or, at least, not likely to be of great importance. Even in the issue of no-par stock, the probability of error is not great because the supervision of the ICC prevents issue of shares with stated values less than the value of the consideration received (as opposed to the stated value and paid-in surplus frequently found in the issue of no-par shares of industrial companies). The point most open to question arises in measuring the amounts of funded debt or stock sold from the investment accounts of the railroads. It would seem highly unlikely that the consideration received at the time of sale, particularly in recent years, would be equal to the amount paid at the time of purchase, and the error may not be self-correcting. Nevertheless, the measures will be used without adjustment,

[37] The change in the reserve is assumed to be equal to the charge against income.

[38] As indicated in connection with each account, the data do not cover the entire industry. On the other hand, the difference between the data for Class I roads and their non-operating subsidiaries and for the entire industry is quite small, and may safely be neglected.

implying that the average value of the consideration received and the average of the par or stated values of securities sold are equal.

The final point concerns "Working Capital Increases" and "Working Capital Decreases." These items are treated separately, the first as an application and the second as a source of funds. Where they are considered as aggregates of annual changes, it might appear that a net figure would be more acceptable. Use of the net figure was discarded, however, because it appears reasonable to consider the funds from all sources during any given period as flowing into a reservoir from which the funds applied were drawn. If, as the writer believes, it be fair and useful to employ this concept, there is no justification for presuming that working capital increases offset working capital decreases and therefore no justification for using the net figure.

VIII. Funds Secured by Sale of Credit Obligations

The first major source of funds is the sale of credit obligations (Table XV). Data in the previous articles quite definitely confirm the generally expressed opinion that credit obligations were used more than stock. In the following analysis, the actual amount of funds derived will be compared to the new issues in order further to confirm or to reject this conclusion and to ascertain more definitely the actual gain from issuing funded debt as a whole and, if possible, from issuing different types of credit obligations.

A few elements in the pattern of this acquisition of funds resemble elements of the pattern in the issue of securities. Three years of exceptional acquisition (1923, 1924, and 1930) have direct counterparts in certain of the volume data presented in Table I.[39] The year 1930 is associated with extraordinary financing through security issues of all types, including sale of some $230 millions of credit obligations owned by the industry. The earlier years (1923 and 1924) are particularly associated with the issue of equipment trust certificates and, since the sale of these securities is seldom connected with refunding or other form of simple refinancing, it may be assumed that the major portion of the funds acquired did result from sale of these issues. If this is true, the tendency to small or negative accumulation of funds in the following years may be partially explained by the requirement of debt reduction associated with the serial maturity of the equipment obligations, the issue of which was so distinctly concentrated in this two-year period.

TABLE XV. THE AMOUNT OF FUNDS DERIVED FROM SALE OF CREDIT OBLIGATIONS:* BY YEARS AND CUMULATIVELY, 1921–38 INCLUSIVE
(In Millions)

Year	Change from Previous Year	Cumulative Total
1921	$116.3†	$ 116.3
1922	115.1	231.4
1923	438.5	669.9
1924	429.5	1,099.4
1925	− 89.3	1,010.1
1926	98.2	1,208.3
1927	− 26.6	1,081.7
1928	50.1	1,131.8
1929	109.3	1,241.1
1930	419.5	1,660.6
1931	− 30.4	1,630.2
1932	33.6	1,663.8
1933	−131.4	1,531.9
1934	145.6	1,677.5
1935	−134.5	1,543.0
1936	34.8	1,577.8
1937	7.6	1,585.4
1938	− 56.9	1,528.5

* Derived from Barriger, *op. cit.*, Exhibit No. 561, p. 4021. Data for 1938 were supplied from references footnoting the exhibit.
† A check of the data revealed what appeared to be an error in the datum for 1921 as shown in the exhibit. The figure used above is corrected.

[39] Dougall and Farwell, *op. cit.*, Part I, p. 208.

The end of the prosperity phase of the major cycle brought a new phase of capital procurement into being. The period 1931–38 is characterized by the application of funds to reduction of debt. The difference between the cumulative total of funds acquired at the end of 1929 and the end of 1938 shows a decrease of $132 millions. During this same period the funded debt matured unpaid account increased $656 millions and the funds secured by issue of receivers' and trustees' certificates amounted to $125 millions. In the single year of apparently great acquisition of funds (1934), the increase in funded debt matured unpaid was $186 millions, the increase in receivers' and trustees' certificates was $40 millions, and the increase in funds contributed by government agencies was the greatest for any year on record. Taking the period as a whole, without the funds derived by default or by securities of roads in the hands of the courts, the data would show a net debt reduction of $914 millions, somewhat more than ½ of the funds that had been received during the 20's.

Even during the 20's, slight amounts ($78 millions by increase of the funded debt matured unpaid and $9 millions by issue of receivers' certificates) had been obtained from these sources and the net amount for the entire period under review attributable to the sale of new credit obligations cannot have exceeded $677 millions. The cumulative total of $1,528.5 millions at the end of 1938 represents funds accumulated 56% from what may be called distress financing and 44% from the sale of new credit obligations.

Comparison of the changes in the amounts of outstanding issues of the different classes of funded debt suggests that the funds secured through these accounts came in almost entirely from the issue of mortgage bonds (Table XVI).

TABLE XVI. CHANGES IN OUTSTANDING FUNDED DEBT OF AMERICAN RAILROADS, DECEMBER 31, 1920 TO DECEMBER 31, 1938*
(In Millions)

Type of Security	1920	1938	Change
Mortgage bonds	$9,761	$11,235	$1,474
Collateral trust bonds	1,059	810	−249
Income bonds	356	365	9
Miscellaneous obligations	917	860	− 57
Equipment obligations	686	495	−191
Totals	$12,779	$13,765	$ 986
Deduct—increase in holdings of railroad companies			$309
Net increase in capital resulting from sale of funded debt			$677

* ICC, *Statistics of Railways in the United States*, 1920, Tables 18 and 20; 1938, Tables 142 and 143.

The conclusion rests on certain assumptions about the obligations held by the railroads themselves and about which no definite information is available. First, it is assumed that the liquidation in miscellaneous and equipment obligations cannot be accounted for by the increase in the obligations owned by the railroads because of the shortness of maturity in the first case, the form of the security in the second, and finally because of the decline in the numbers of issues involved in intercompany transfers.[40] Second, the nature of the income and of the collateral trust bond suggests that the small changes in the totals of these securities outstanding are not attributable to acquisition by the railroads. On the basis of these assumptions it is fair to conclude that $9 millions may have been contributed by the sale of income bonds, but the remainder of the funds secured by issue of credit obligations must have come from the issue of mortgage bonds.

Therefore, of the $9,460 millions of issues[41] distributed during the entire peri-

[40] Dougall and Farwell, *op. cit.*, Part II, pp. 314–5.

[41] It will be recalled that sales of bonds and equipment trust certificates, for which the total authorized to be sold was less than $100,000, are not included in the volume data.

od, not more than 8% provided funds for capital purposes[42] and the remainder had the net effect of maintaining control of capital previously secured. Of the mortgage bonds included in the volume data, not more than 10% provided funds for capital purposes.

IX. Funds Secured by Sale of Stock

In the acquisition of funds by sale of stock, changes in the holdings of the railroad companies play a much greater part than they did in the acquisition of funds by sale of bonds (Table XVII). This is true not only because the changes within particular years were large but also because the total funds acquired annually were relatively small. In fact, inspection of the data suggests that the determining factor throughout the period has been the degree of reduction or of increase in the railroads' holdings of railroad stocks. The years of greatest sale of stock from the intra-industry investment accounts were 1928, 1933, and 1936. It will be noted that these years are among the most important with respect to size of acquisitions. On the other hand, the years in which the industry most sharply increased its holdings—namely, 1924, 1927, 1930, and 1937—are characterized by debt reduction despite the fact that in three of these years the amount of stock issued was quite large. Only in 1929, when the change in industry holdings was slight, does stock issuance appear to have had the direct effect of accumulating funds.

It may be concluded that new issues have not been of primary importance in terms of acquiring funds and, by comparing the cumulative total at the end of 1938 with the total value of new issues, that not more[43] than 11% of the new issues resulted in funds available for capital purposes. On the other hand, it is interesting that 29% of the shares sold by the industry during the 20's brought funds into asset accounts, and perhaps it might be said that, in so far as managements decided to issue stock, this type of security was employed more efficiently than is ordinarily supposed.

TABLE XVII. THE AMOUNT OF FUNDS DERIVED BY SALE OF STOCK:* BY YEARS AND CUMULATIVELY, 1921–1938 INCLUSIVE (In Millions)

Year	Change from Previous Year	Cumulative Total
1921	$−33.1	$−33.1
1922	77.9	44.8
1923	95.7	140.5
1924	−41.2	99.3
1925	79.6	178.9
1926	−55.0	123.9
1927	−74.4	49.5
1928	328.0	377.5
1929	128.5	506.0
1930	−27.1	478.9
1931	−74.5	404.4
1932	−53.1	451.3
1933	116.8	468.1
1934	−135.8	332.2
1935	−37.3	295.0
1936	93.5	388.5
1937	−26.3	362.2
1938	−46.1	316.1

* Derived from Barriger, *op. cit.*, Exhibit No. 560, p. 4020. Data for 1938 were supplied from references footnoting the exhibit.

X. Funds Secured from Income Accounts

Funds may be secured by income accounts which divert the flow of funds from the revenue-earnings-dividend path

[42] If it be assumed that the bonds owned by the railroad companies at December 31, 1920 which remained outstanding but in the hands of the public at December 31, 1938 are negligible in amount, then all funds acquired were supplied by purchasers of new issues of credit obligations. However, the percentage relationship must still be qualified because the totals do not include all new issues (see n. 41).

[43] Note that the qualification here must remain despite the fact that the volume data cover all sales made under authorizations by the ICC, because there is no ground for assuming that stock owned by the railroads at the end of 1920 is not now existent.

and, by one or another means, direct them into reservoirs from which they may be drawn for capital purposes. In terms of the size of contributions, such diversions are of outstanding importance (Table XVIII). Three-quarters of the total of funds from all sources came from accounts grouped in this class.

The backbone of these contributions is provided by appropriations to reserves for depreciation and retirements. These appropriations have been both stable and relatively large. They have accounted for nearly twice as much accumulation of funds as the combined amounts from sale of securities and somewhat more than ⅓ of the total from all sources. This is not surprising. The events of the last several years indicate that the period of expansion of roadbed and trackage has passed. Possibly, even, there will be little future expansion of equipment requirements in terms of carrying capacity. If this be true, over any long period of time—say, the major cycle—it might be reasonably expected that depreciation and retirements would be the single major source of funds and that the volume of security financing would have the primary purpose of retaining funds previously secured with the secondary purpose of providing funds to meet higher prices for replacements. Inasmuch as the rate of expansion during the 20's was quite low relative to earlier periods and in view of the definite reversal of trend during the 30's, the generalizations made above would seem applicable to the period under review and the importance of depreciation and retirement is quite in line with what might be expected. It may even be suggested that this is typical of any industry passing beyond the growth phase and entering, as the railroads seem to be, the phase of decline in the life cycle.

TABLE XVIII. THE AMOUNT OF FUNDS DERIVED FROM INCOME ACCOUNTS:* BY YEARS AND CUMULATIVELY, 1921–1938 INCLUSIVE
(In Millions)

Year	Depreciation and Retirements	Undistributed Earnings	Income from This and Other Years	Donations	Total	Cumulative Total
1921	$ 156.1	$ 16.7	$ 272.2	$ 6.7	$ 451.7	$ 451.7
1922	169.4	90.2	197.0	5.6	462.2	913.9
1923	213.1	261.4	116.0	5.1	595.6	1,509.5
1924	200.7	252.9	93.6	5.4	552.6	2,061.1
1925	224.0	383.8	89.9	4.1	701.8	2,763.9
1926	232.6	440.3	65.9	4.7	743.5	3,507.4
1927	240.0	199.2	101.7	3.7	544.6	4,051.0
1928	242.5	329.9	187.9	7.4	767.7	4,189.7
1929	261.2	443.1	114.9	3.2	822.4	5,641.1
1930	244.1	6.7	106.9	3.6	361.3	6,003.4
1931	222.4	−232.7	66.1	3.2	59.0	6,062.4
1932	209.8	−221.8	42.2	2.0	32.2	6,094.6
1933	199.9	− 50.0	55.1	7.3	212.3	6,306.9
1934	191.5	−126.0	86.9	1.4	153.8	6,460.7
1935	196.8	− 33.0	68.9	2.3	235.0	6,695.7
1936	196.5	133.4	27.7	3.6	361.2	7,056.9
1937	202.0	53.8	91.6	1.5	348.9	7,405.8
1938	204.1	− 48.7	108.9	1.4	265.7	7,671.5
Totals	$3,806.7	$1,899.2	$1,893.4	$72.2	$7,671.5	

* Derived from Barriger, *op. cit.*, Exhibit No. 559, p. 4019. Data for 1938 were supplied from references footnoting the exhibit.

Second in importance to allocations for depreciation and retirements are undistributed earnings. These make up a larger portion of the total than do combined contributions from sale of securities. Again, the importance of this group of accounts may perhaps be considered typical of the matured industry. In so far as additional funds can be secured from creditors, and more particularly from owners, they tend to be represented by the retention of income which might have been paid out rather than by new contributions from additional security holders or even from additional current creditors. The amounts retained during the 20's are, quite naturally, greater than those retained since. The 30's have been characterized by a lack of earnings available to stockholders and, despite the importance of earnings retained from creditors by defaulting on interest payments, the net amount of undistributed earnings has been negative. It is quite difficult to make any estimate of the probable future importance of these undistributed earnings without becoming entangled in the problem of forecasting the earning power of the railroads, but a glance at the proposed changes in the capitalization of roads in bankruptcy[44] suggest, at least, that earnings retained in the future will be owned by stockholders, many of whom were once bondholders.

Ranking of equal importance must be accorded both undistributed earnings and income from this and other years. This latter group of accounts is rather heterogeneous. It contains profits from occasional sales of assets from both road and equipment accounts, and non-operating income which may be earned by subsidiary roads but which is not passed on to the parent in the form of dividends. The very position of the accounts on the income statement carries an implication of unpredictability. It would be a task rather more detailed and perhaps more difficult than falls within the scope of this article to analyze the actual reasons for the size of these accounts or to predict the future importance of the group as a source of funds. But, judging only from the appearance of the data, particularly the slight tendency to cyclical movement, it seems fair to consider this to be a source which may endure and provide a a fairly stable contribution.

Donations are of minor importance and completely unpredictable, except in so far as they may have accompanied building of road or of non-operating properties in the past, and in so far as such activity may decline in the future, accompanied by a decline in donations.

XI. Funds Secured from All Sources

The pattern of the aggregate amounts of funds drawn from the sources discussed as well as from working capital decreases reveals little of direct importance for analysis of these contributions. The single year in which working capital decreases, the only factor not previously discussed, were of great importance was 1931, when the decrease in working capital was greater than the total amount of funds derived from all sources (Table XIX). Other years of interest are those of greatest overall contributions—namely, 1923, 1924, 1928, and 1929. In the first two of these years, these contributions yielded the greatest amounts of *new* capital taken in during the entire period. "New capital" connotes the increase in investment in road and equipment—i.e., the total of funds applied to investment and equipment accounts, less the amount spent on retirements, less the changes resulting from sale or combination, and less the amount of certain miscellaneous adjustments. During

[44] Dougall and Farwell, *op. cit.*, Part II, p. 312.

the latter two years (1928 and 1929) a large portion of the funds was applied to retirement of road or equipment. The 30's are remarkable as a period of relatively small totals, relieved only by minor peaks in 1936 and 1937.

XII. The Contributing Groups and the Types of Financing

Before drawing conclusions from the data, it seems advisable to present two regroupings, differing slightly from each other and from the presentation just completed, in an effort to round out the picture of the sources from which funds available for capital purposes have been drawn. The regrouping is hampered, however, by several questions in which usefulness and convenience are matched against theory and practice. Determination of the number of contributing groups and the proper titles for the classes might be resolved by the simple expedient of accepting the usual argument that all capital is derived either from owners or creditors. However, it seems more reasonable to introduce a third class composed of those items arising more as a result of operations than as the result of any direct effort on the part of owners or creditors. The class would include reserves for depreciation and retirements, income from this and other years, and donations. An item of borderline significance is "Working Capital Decreases." The actual reduction of working capital entails no effort by owners or creditors, but, for the most part working capital is supplied by the former. This item, therefore, in company with funds from the sale of stock and from reinvestment of earnings applicable to stock, has been placed in the "owner" class. The items in the "creditor" class need little description. They are: funds from sale of bonds and receivers' or

TABLE XIX. THE AMOUNT OF FUNDS DERIVED FROM ALL SOURCES: BY YEARS AND CUMULATIVELY, 1921–1938 INCLUSIVE
(In Millions)

Year	Securities	Income	Working Capital Decreases*	Total	Cumulative Total
1921	$ 83.2	$ 451.7	$132.7	$ 667.6	$ 667.6
1922	193.0	462.2		655.2	1,322.8
1923	534.2	595.6		1,129.8	2,452.6
1924	388.3	552.6		940.9	3,393.5
1925	− 9.7	701.8	57.0	749.1	4,142.6
1926	43.2	743.5	65.6	852.3	4,994.9
1927	−101.0	544.6	105.5	549.1	5,544.0
1928	378.1	767.7		1,145.8	6,689.8
1929	237.8	822.4	107.6	1,167.8	7,857.6
1930	392.4	361.3	86.6	840.3	8,697.9
1931	−104.9	59.0	254.1	208.2	8,906.1
1932	− 19.5	32.2	88.7	101.4	9,007.5
1933	− 15.1	212.3	28.7	225.9	9,233.4
1934	9.8	153.8		163.6	9,397.0
1935	−171.8	235.0		63.2	9,440.2
1936	128.3	361.2		489.5	9,949.7
1937	− 18.7	348.9	43.1	373.3	10,323.0
1938	−103.0	265.7		162.7	10,485.7
Totals	$1,844.6	$7,671.5	$969.6	$10,485.7	

* Working Capital Decreases are taken from Barriger, *op. cit.*, Exhibit No. 563, p. 4022. Data for 1938 were checked from references footnoting the exhibit. Other data are from previous tables in this article.

trustees' certificates and funds obtained by default on principal and interest payments.

The groupings under the heading of "types of financing," where the intent is to divide the items into classes showing the distribution of funds between voluntary and involuntary contributions by security holders and contributions achieved by book entries or from persons outside the industry other than the security holders, are: security issue, default, and internal distribution (Table XX).

Perhaps the most surprising result of the regrouping is the importance of owners' contributions during the 20's. To be sure, the relatively small amount derived from sale of stock is quite in line with previous conclusions. But the extremely large reinvestment of earnings combined with the rather nominal contributions of new issues and working capital decreases provides the major contribution according to this grouping and suggests that railroad managements had made far more use of equity financing than is ordinarily supposed. If it be granted that, up to the end of 1929, railroad managements were quite free to choose the media by which to raise capital and that all of the media might have been employed successfully, then the apparent lack of emphasis on equity financing as measured in terms of the relative issue of bonds and stocks is simply a reflection of the exercise of judgment. If funds could be obtained from stockholders in the amounts indicated by withholding earnings, how much better when issuing securities to employ the advantages accruing from the special demands for credit obligations, and particularly railroad credit obligations, which characterized the 1921–29 period.

On the other hand, comparison of the data for 1921–29 with those for 1921–38 suggests that general criticism of the funded debt policy of the railroads, the policy covering the life of the industry rather than just the period of the 20's, was well grounded. The rapid expansion in creditors' contributions, arising from an even more rapid expansion in the amounts obtained by default, and the decline in owners' contributions are,

TABLE XX. CONTRIBUTING GROUPS AND TYPES OF FINANCING
(In Billions)

Contributors	1921–1929		1921–1938	
	Amount	Per Cent of Total	Amount	Per Cent of Total
Creditors:				
New issues of bonds	$1.2	15	$ .7	7
New issues of receivers' certificates	—	—	.1	1
Default of principal	.1	1	.7	7
Default of interest	—	—	.9	8
Total from Creditors	$1.3	16	$2.4	23
Owners:				
New issues of stock	$ .5	6	$ .3	3
Reinvested earnings	2.4	31	1.0	9
Working capital decreases	.6	8	1.0	10
Total from Owners	$3.5	45	$2.3	22
Operations:				
Depreciation and retirements	$1.9	24	$3.8	36
Income of this and other years	1.2	15	1.9	18
Donations	—	—	.1	1
Total from Operations	$3.1	39	$5.8	55
Total	$7.9	100	$10.5	100
Types of Financing:				
New issues (including receivers' certificates)	$1.7	21	$1.1	11
Default	.1	1	1.6	15
Internal Distribution:				
Depreciation and retirements	1.9	24	3.8	36
Reinvested earnings	2.4	31	1.0	9
Profit and loss adjustments	1.2	15	2.0	19
Working capital decreases	.6	8	1.0	10

looking backward, what might be expected from an industry committed to the payment of considerable fixed sums for its capital at a time when adverse factors combined to reduce its ability to earn and, therefore, to employ the capital it had obtained. A paradoxical element is involved. The amount of capital is too great; the opportunity to reduce it is gone. The situation is pictured in part by the decline in funds from new issues and the increase in default. The picture is heightened somewhat by the rather greater decline in funds obtained by reinvestment of earnings. The funds lost by withdrawal of voluntary creditors plus those lost by reduction of reinvestments are double the amount gained by creating a new class of creditor through defaulting in payments to the old. There is a tendency toward reduction in capital as well as an indication that the reduction is not sufficient.

A summary of the trends revealed in the table, those discussed above, and the remainder yet undiscussed, shows that three items—new issues of bonds, new issues of stock, and reinvested earnings—decreased in relative importance; whereas seven items—new issues of receivers' certificates, default of principal, default of interest, working capital decreases, depreciation and retirements, income of this and other years, and donations—increased in relative importance. The picture could be weaker only if circumstances had somehow combined to make funds derived from reserves for depreciation and retirement less important. It seems reasonable to suggest that either the trends must change or the industry cannot exist.

That there will be change is quite likely. The decline in importance of reinvested earnings is closely associated with the increase in the amount of interest in default. In effect, as suggested by inclusion of interest default in the group of accounts classed as "undistributed earnings" in the original presentation of the data, funds derived in this manner are reinvested earnings, differ only in the fact that they are the earnings which should accrue to creditors rather than to owners and, therefore, differ in their legal aspects. It is doubtful that a corporation or any succession of corporations could exist with continued demands on forced investment from the creditors, but they may exist without permitting the stockholder an opportunity not to reinvest his funds. At present, the plans of reorganization approved by the ICC reflect changes in capitalization which will materially reduce the need for further default of interest and will not entail funds derived from undistributed earnings.[45]

These same changes are likely to reduce the need for accumulating funds by default of principal and to create many new issues of stock.

The decline in the importance of the reserves is relative only, and stems largely from the magnitude of the increase in default. If present reorganizations are effected in reasonable accordance with the apparent beliefs of the ICC, the absolute increase in the amounts derived from these reserves will also increase relatively. It may also be true that, regardless of reorganizations, the present production boom and the accompanying demand for transportation will supply the industry with earnings which will materially decrease the current importance of default, increase the importance of reinvested earnings somewhat, decrease the need for working capital decreases, and make the reserves a major source of funds for capital purposes.

[45] See Dougall and Farwell, *op. cit.*, Part II, Table IX, p. 312.

XIII. Concluding Statement

The data seem to point clearly to the decline of a great industry. But that is not new. There is, however, a degree of concreteness not ordinarily associated with popular recognition of that decline. During the 20's, the funds available for capital purposes were quite sizable, amounted to more than $1 billion in each of three of the nine years between the end of 1920 and the end of 1929 and to $7.9 billions for the 1920–29 period as a whole. Of the full amount of new issues of stock which railroad management authorized to be sold, 29% resulted in the acquisition of funds. The funds derived from stockholders by sale of new issues, by reinvestment of earnings, and by decreasing working capital accounted for 45% of the total of all funds. The greater proportion of credit obligations (more than 90%) were issued in connection with transactions that did not result in accumulating funds for capital purposes, and the funds supplied by creditors were but 16% of the total from all sources. The remainder (39%) were derived from accounts more readily attributed to normal operations than to either of the other two classes.

These figures, contrary to the full story, speak of a prosperous industry until the advent of the 30's. But with the 30's came a distinct, rapid increase in funds obtained by default. The contributions of voluntary creditors and of stockholders declined materially. The single continuing, strong source of funds was the allocation to reserves for depreciation and retirements. The picture of an industry overtaken by a disastrous decline in its ability to support the capital it had acquired is fairly complete. The prospect of the industry's becoming solvent seems to depend on drastic reorganization and that reorganization will be accomplished if plans of the type approved by the Interstate Commerce Commission go into effect. However, the present outlook for funds focuses on the internal distribution of revenues, with particular emphasis on reserves for replacement of present capital.

Urban Land Department

MORTON BODFISH, *Editor*

A Backward Step in Zoning

IN zoning, the theory is that each district is an appropriate area for the location of the uses which the zone plan permits in that area, and that the existence or entrance of other uses will tend to impair the development and stability of the area for the appropriate uses. Usually some of these other uses exist when the ordinance is passed. The theory calls for their eradication. If the non-conforming use is a building, it might be unconstitutional and is certainly unjust to require the owners to eradicate immediately. Consequently zoning ordinances generally provide that the non-conforming uses which exist at the time of the passage of the ordinance may continue.

Time brings changes, and if this right of continuance be restricted to the type and extent of the existing use, without enlargements, structural changes in the building or change in type of use, sooner or later the non-conforming use would disappear. Zoning ordinances, however, usually do not limit the life of the non-conforming use to the exact type of use and size existing at the time of the ordinance. For instance, they do not, as a rule, specify that a non-conforming grocery store must remain a grocery store of the same size. Instead the ordinances usually allow for enlargements or changes in type of use. Still, in the light of the theory, the provisions regarding these privileges ought be literally and strictly enforced; otherwise eradication of non-conforming uses would tend to be indefinitely postponed.

The recent case of *State ex rel. Morehouse* v. *Hunt et al.*, in the Supreme Court of Wisconsin,[1] is an illustration of the way courts sometimes do not literally interpret or strictly enforce and do thereby lengthen the duration of non-conforming uses. The case arose under the Madison, Wisconsin, ordinance and was concerned with a single-family residence district in the vicinity of the University of Wisconsin. Space permits only an abbreviated statement of the facts.

At the time the ordinance went into effect, there existed in the district a dormitory or college fraternity house. In 1932 the fraternity moved out and the mortgagee of the premises took possession and acquired title through foreclosure. For a short time the property was operated as a rooming house, but on the first of September, 1934 it was leased to the dean of the law school for two years, "to be used as a residence only." It was a large building with rooms of such number as to make it more adapted for a fraternity or rooming house than for a single-family residence; it had four bedrooms, a kitchen, laundry, bathroom, storeroom, and garage on the basement floor; a sun-parlor, library, living-room, dining-room, kitchen, lavatory, and hall on the first floor; and five bedrooms, two sleeping porches, two dressing or study rooms, and two bathrooms on the second floor.

For the first year of his tenancy—namely, September 1934–1935—the lessee, whose family consisted of the husband and wife, three children, and three servants, used the building as his own single-family residence and made some use of practically all parts of the structure. In the second year, however, the lessee took in a sub-tenant for some of the basement rooms, including the dismantled basement kitchen which he equipped for the purpose, and thereby in effect converted the use of the building into a two-family residence. The first lease was subject to termination after 20 months of tenancy. Thereafter each September first a new lease for one year was made, including September 1, 1938, each lease subject to termination in case the owner sold the property. In April, 1939, five and a half years after the rooming or fraternity-house use had ceased, there came a chance to sell to a fraternity. The owner's application for a certificate which would permit the fraternity use was refused by the building official, which refusal was overruled by the board of appeals, which overruling was in turn overruled by the trial court, and the case was taken into the Supreme Court.

The pertinent provisions of the Madison ordinance concerning non-conforming uses were:

(1). "The lawful use of *land* existing November 20, 1922 . . . may be continued although such use does not

[1] 291 N.W. 745 (1940).

conform to the provisions hereof, but if such use is *discontinued*, any future use of such premises shall be in conformity with the provisions of this chapter."
(2). "The lawful use of a *building* existing November 20, 1922 . . . may be continued although such use does not conform with the provisions hereof. . . . Whenever a nonconforming use of a *building* has been changed to a *more restricted* use or to a *conforming* use, such use shall not thereafter be changed to a *less restricted* use." (Italics mine.)

Neither two-family buildings nor fraternity houses were permitted in the single-family district, but both were permissible in the next class of district.

As sub-section (1) speaks of "land" and (2) of "buildings," a strict and more tenable interpretation would hold that sub-section (1) does not apply to the case and consequently the definition of "discontinued" was not involved. But the opinion of the court turned on this word "discontinued" more than on any other word in the ordinance. Since two-family use would seem to be more restricted than fraternity-house use and since there were five years of two-family use the language of the ordinance, if applied in accordance with strict interpretation, would preclude resumption of fraternity-house use. But the court treated the definition of "more" and "less" as governed by the fact that in another class of district both uses would have been conforming. Most plain of all would seem to be the fact that the year of single-family use was a change to a conforming use; and the ordinance stated that such a change terminated the right to resume a less restricted use. The court, however, decided in favor of the right to change back to the fraternity house.

The court escaped from the strict, natural, and unstrained interpretations of very plain and unambiguous words by injecting into the process of interpretation large doses of mental and subjective elements—namely, the intention of the owner regarding future uses as distinguished from the more objective test of the actual physical use—though there was not a syllable in the ordinance on the intention of the owner. Numerous facts and circumstances bearing on these mental elements were introduced into the evidence and given decisive weight by the court. For example, it was stated that the depression removed, for the five-and-a-half-year period of occupancy by the dean, the opportunity to get a fraternity purchaser; that the leases were for two years or year to year, with the reservation to cancel if an opportunity to sell arose; that the rent was about equal to the carrying expenses and low considering the size of the building and its assessed valuation. From all these considerations the court inferred that the owner never intended to abandon or discontinue the fraternity-house use.

On the other hand, the owner had made some structural changes for his single-family residential tenant; for five years he contracted for residential use of the building; and he obtained a reduction in the tax assessment on the plea that he was not allowed to lease or sell the property for a fraternity house but only for a single family residence. All of these the court held to show no more than that the owner was trying to get some stop-gap revenue until economic conditions restored the market for rooming or fraternity houses.

Realistically considered, of course, the owner did not have any intention on the subject, but simply leased to whomsoever he could and got what he could out of the property; and the use actually made of the property was such that, had the actual provisions of the ordinance been applied literally, the right to resume fraternity-house use would have been held gone. A clear, simple dissenting opinion to that effect was filed by three of the seven judges.

Underlying these conflicts in judicial decisions there may be a deep difference in the legal concept of zoning. Is a zoning ordinance the creation of a set of individual rights of neighbors for and against each other or the creation of an integrated social plan for community development? Space does not permit the presentation of the point; but the court opinion before us contains much evidence of the former concept and rather little of the latter.

In actual practice, the zoning principle of gradual termination of non-conforming uses is not having the desired success. A number of court decisions have applied it with greater fidelity than did this Wisconsin decision: but what with the leniencies and language-stretching indulged in by administrators and courts, the hoped-for successful application of the principle under the present customary provisions of zoning ordinances does not seem to be promising. In many cities the difficulties have arisen from the zone plan itself, which is not so careful,

thorough, and honest as to produce a zone map which justifies the starving of the non-conforming uses.[2] Even when the original map has both thoroughness of thought and moral integrity, time's changes frequently cause non-conforming uses to find themselves in the midst of an obsolescent vicinity, that is, a vicinity which has reached the point where it is no longer appropriately restricted to the conforming uses; then the problem of amending the map should be frankly faced.

However, the attitude, approaches, or methods of analysis represented by the opinion in this Wisconsin case are not the road to sound principle. The owner's intentions for the future are too vague, too uncertain, too elusive, and the adoption of those intentions as the test of the right to change or resume non-conforming uses is too productive of biased or indefinite administration or adjudication for the development of any sound principles. Perhaps a certain degree of illogicalness and internal inconsistency in the opinion of the majority of the Wisconsin court may illustrate the devastating effect of testing change or discontinuance of use by mental or subjective factors.[3] Hard cases make bad law; and it is, of course, hard luck to own, in a single-family district, a building too big to have a good market for single-family use. Wisconsin municipalities could no doubt obtain relief from this particular decision by inserting into their ordinances even more definite expression of actual physical use as the test.

However, some test even more definite than those furnished by present customary provisions of zoning ordinances may be necessary if we are to apply successfully the principle of the termination of non-conforming uses at as early a period as is practicable and just. It would be well, therefore, to experiment with standards such as the fixing of definite terms of years within which non-conforming uses are to die away or be removed. The zoning bill which was introduced in Congress for the District of Columbia contained a provision to the effect that the legislative body could fix termination periods or provide for termination periods based on the amortization of the investment in the non-conformance.[4] Congress did not enact that provision. Although it is to be hoped that the courts generally will not follow the Wisconsin Supreme Court's test of mental intention as distinguished from actual physical use, still, for much progress in this important matter of the non-conforming use, we should, in the first place, make and enforce careful, thorough, and intellectually honest zone plans and, in the second place, devise more definite and objective standards than those which now are customary.

Cincinnati, Ohio ALFRED BETTMAN

[2] This remark does not apply to Madison.

[3] Compare the opinion of the highest court of Maryland in *Chayt v. Board of Zoning Appeals of Baltimore City*, 9 Atl. (2d) 747 (1939), which held that actual present use, not intention as to future use, governs.

[4] S. 3361, 75th Cong., 3rd Sess.

Defense Housing and the Lanham Bill

IN 1939, S.591 which had passed the Senate was reported by the Rules Committee to the House of Representatives and upon a record vote of about two to one the House of Representatives declined to consider the bill. This was the bill which provided $800,000,000 to be loaned by the United States Housing Authority to local housing authorities to be paid back, and authorized annual grants of $45,000,000 per annum for 60 years, or a total of $2,700,000,000 to be paid out of the federal treasury over the 60-year period in outright grants. The provisions of this bill were consistent with the whole theory of the United States Housing Authority for public housing development. In the light of the discussion on the floor of the House of Representatives, one cannot escape the conclusion that the members of the House declined to go forward because of (1) the capital cost of the program; (2) the cost of operation of apartment-hotel accommodations, and (3) doubts as to the advisability of government landlordism.

Therefore, the Lanham Bill, H.R. 10412 enacted as Public No. 849 of the 76th Congress, approved October 12, 1940, is significant. This authorizes the appropriation of $150,000,000 to remain available until expended and on the same date a resolution appropriating $75,000,000 and authorizing contracts for an additional $75,000,000 for the purposes of the bill was approved. This

bill provides:

"In order to provide housing for persons engaged in national-defense activities, and their families, in those areas or localities in which the President shall find that an acute shortage of housing exists or impends which would impede national-defense activities and that such housing would not be provided by private capital when needed."

The Federal Works Administrator is authorized to act under the bill.

The Administrator is authorized to acquire property and develop and improve it for such housing, including "proper approaches thereto, utilities and transportation facilities." It is provided that

"the cost per family dwelling unit shall not exceed an average of $3,000 for those units located within the continental United States nor an average of $4,000 for those located elsewhere, and the cost of no family dwelling unit shall exceed $3,950 within the continental United States or $4,750 elsewhere, exclusive of expenses of administration, land acquisition, public utilities, and community facilities, and the aggregate cost of community facilities shall not exceed 3 per centum of the total cost of all projects."

When the emergency declared to exist by the President on September 8, 1939 shall cease to be, action under the law shall stop and "property acquired or constructed under this act shall be disposed of as promptly as may be advantageous under the circumstances and in the public interest." Funds derived from operation of the property may be used for expenses, but at the end of each fiscal year any unobligated amount of such funds is transferred into the general fund of the Treasury as miscellaneous receipts.

The act relieves the Administrator in acquiring and developing such property from the operation of numerous federal statutes relating to the acquisition and conveyance of title by the United States and various restrictions upon the power to contract and, in effect, authorizes him to act in his discretion in carrying out the provisions of the bill. The Administrator is required to "fix fair rentals on projects developed pursuant to this Act, which shall be within the financial reach of persons engaged in national defense." The Administrator is given the broadest authority to act through the Federal Works Agency and other federal agencies as well as any local public agency, and the act also authorizes a transfer of funds to such agencies. The act does not subject the property acquired to local taxation, but authorizes the Administrator to enter into agreements to pay annual sums in lieu of taxes not in excess of taxes on such property if it were not exempt from taxation. For the construction of such housing the established eight-hour day and prevailing wages are required. The Administrator is authorized to make such rules and regulations as may be necessary to carry out the provisions of this act, and shall establish reasonable standards of safety, convenience, and health.

Under the act housing may be built for army and navy personnel and their families, for employees of the United States in the Navy and War Departments assigned to duty at naval or military reservations, posts, or bases and for workers engaged or to be engaged in industries connected with and essential to the national defense. It appears that houses may be built for persons enlisted in the army and navy and their families wherever such families may reside. The reference to "workers engaged or to be engaged in industries connected with and essential to the national defense" appears to be broad enough to authorize the building of such housing in almost any industrial area. It is clear, however, from the bill as a whole that the Congress intends that the appropriation be used only for emergency defense housing where adequate housing cannot be provided by private enterprise. The provision for "community facilities" and "utilities and transportation facilities" indicates an intention to continue the theory of integrating groups of housing built in the apartment-hotel style of accommodation or otherwise so as to make possible supervision and control of tenants. The broadest provision for "rules and regulations" which is quoted above further indicates an intention to govern the inhabitants of such housing and to regulate their daily life within these homes in accordance with the view of those administering them.

Perhaps the most significant provisions of the bill are those limitations fixed by the Congress which apparently grew out of the discussions of public housing legislation in 1939. The first of these is the limit as to cost of family units, but this limit of $3,950 in the United States and $4,750 elsewhere is high in view of the fact that it is exclusive of the cost of administration, land acquisition, public utilities, and community facilities. It is substantially above the average value of

privately owned homes in the United States. Furthermore, some of the principal criticisms of public housing to date have been of costs of administration, costs of land acquisition, costs of public utilities, and costs of community facilities heretofore provided in public housing, and these items are excluded and only community facilities are regulated at all. The next significant limitation is the provision that this program shall stop when the emergency ceases to exist and, most important of all, that the housing acquired shall be disposed of "as promptly as may be advantageous" at such time. This housing is not built for low-income families but for military families and defense workers' families and the act requires "fair rentals." Normally most defense workers will earn more than the average of workers in the country. The act retains tax exemption which has been sharply criticized, but it authorizes the Administrator to make payments in lieu of taxes. It is hard to see why defense workers who are in the main earning more than anybody else should be exempted from taxes such as others must pay.

The bill is encouraging to everyone interested in total defense, as most of us are. Its chief significance is found in certain provisions referred to here which indicate an intent on the part of the Congress to seek new and better means to provide better homes for American families.

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United States Savings and Loan League

The Draft and Real Estate Transactions

HOW will the military preparedness program of the United States affect real estate leases, contracts, and mortgages? That is the question that real estate people are asking their lawyers today. The answer is to be found in the provisions of the Soldiers' and Sailors' Civil Relief Act of 1940,[1] signed by the President October 17. This act is practically identical with an act by the same name passed in 1918.[2]

Although the present act was written primarily for the protection of draftees inducted into the land or naval forces under the Selective Training and Service Act of 1940[3] and of National Guard, reserve officers, and retired personnel, ordered into active military service under authority of the National Guard Act,[4] it applies also to all members of the army, navy, marine corps, coast guard, and officers of the public health service assigned to military or naval duties.

Broadly, in so far as real estate people are concerned, the Soldiers' and Sailors' Civil Relief Act protects these persons against legal proceedings caused by default upon mortgages, rental payments, and installments on real estate contracts. It authorizes, and in some instances requires, the stay of legal proceedings for the duration of the service and three months thereafter.

[1] Pub. No. 861, 76th Cong., 3rd Sess., c. 888, S. 4270.
[2] Pub. No. 103, 65th Cong., H. R. 6361, 40 Stat. 440.
[3] Pub. No. 783, 76th Cong., c. 720, 3rd sess., S. 4164, signed by the President, Sept. 16, 1940.

I. Purpose of the Civil Relief Act

The purpose of the Soldiers' and Sailors' Civil Relief Act of 1940, as stated by Secretary of War Stimson in his letter to Congress (August 14, 1940) urging passage of the bill, is

"to free persons in the military service from harassment and injury to their civil rights during their term of military service and to enable them to devote their entire energy to the defense needs of the Nation."[5]

Although the purpose of this act is to afford relief to those who find they cannot meet their financial obligations because they have been called to military or naval service, the general plan of the act provides for no impediment to be placed in the way of the commencement of actions against those in the service. Wide discretionary powers, however, are conferred upon all courts, federal and state, in which actions may be commenced, to grant a stay at any stage of an action commenced against a soldier or sailor.

In addition, the act deals specifically with those types of contracts that impose a continuing liability upon a soldier or sailor during his term of service, such as contracts for the rent of dwellings, payment on mortgages on property used for dwelling or business purposes by a soldier or sailor or his dependents, and the purchase of real or

[4] Pub. Res. No. 96, 76th Cong., signed by the President, Aug. 27, 1940.
[5] See Senate Report, No. 2109, 76th Cong., 3rd sess.

personal property on contracts requiring installment payments during the period of military service.

With regard to these types of contracts, the bill prohibits or restrains the exercise of those remedies usually given by the terms of such contracts, that do not require the intervention of a court. This is accomplished by requiring the creditor or landlord to exercise all such remedies only by leave of court or to institute an action in court. In the latter case, the action then becomes subject to the general provisions of the act with regard to the stay of actions and execution.

II. Effect of the Civil Relief Act

An immediate result of the enactment of the Civil Relief Act of 1940 should be to stimulate real estate transactions, which have been considerably curtailed recently because of the uncertainties resulting from the talk of war and conscription. The revival of the act affords assurance to those who might be drawn into military or naval service that their interest in a real estate lease, contract, or mortgage will be protected while they are in the service.

The number of contracts and actions relating to real estate that actually will be affected by the act is uncertain. The National Guard Act includes a provision permitting the resignation or discharge of

"any member of any reserve component of the Army of the United States below the rank of captain who is ordered into active military service of the United States pursuant to this joint resolution, who has any person or persons dependent solely upon him for support, and who has no means of support except the wages, salary or other compensation for personal services that he earns. . . . " (§3(e).)

The Selective Training and Service Act of 1940, which first limits its application to men between the ages of 21 and 36, also contains a somewhat similar exempting provision. It authorizes the President,

"under such rules and regulations as he may prescribe, to provide for the deferment from training and service under this Act in the land and naval forces of the United States (1) of those men in a status with respect to persons dependent upon them for support which renders their deferment advisable. . . . " (§5(e).)

As most men who are parties to real estate leases, contracts, and mortgages have dependents, and for that reason can and probably will be relieved of military duty, doubtless the great majority of these real estate instruments, as well as legal actions relating to real estate, will not be affected by conscription. Nevertheless, because some instruments and legal actions will be affected, it is well to have the detailed provisions of the Soldiers' and Sailors' Civil Relief Act of 1940 in mind.

III. Provisions of the Civil Relief Act

The most relevant provisions of the act, so far as real estate people are concerned, may be summarized briefly:

A. Rental Payments. Dependents of a person in military or naval service may not be evicted from a dwelling for which the rent is not more than $80 a month unless the landlord obtains authority from a court.

"No eviction or distress shall be made during the period of military service in respect of any premises for which the agreed rent does not exceed $80 per month, occupied chiefly for dwelling purposes by the wife, children, or other dependents of a person in military service, except upon leave of court granted upon application therefor or granted in an action or proceeding affecting the right of possession." (§300(1).)[6]

The court, however, may stay eviction proceedings for not more than three months or make other orders that are just:

"On any such application or in any such action the Court may, in its discretion, on its own motion, and shall, on application, unless in the opinion of the Court the ability of the tenant to pay the agreed rent is not materially affected by reason of such military service, stay the proceedings for not longer than three months, as provided in this Act, or it may make such other order as may be just." (§300(2).)[7]

[6] Violation of this provision is made a misdemeanor which is punishable by a year's imprisonment, a $1,000 fine, or both, by Sec. 300(3).

[7] The original authors of the Soldiers' and Sailors' Civil Relief Act of 1918, i.e., Messrs. Mansfield Ferry, Samuel Rosenbaum and John H. Wigmore, in an article, "The Soldiers' and Sailors' Civil Rights Bill," 12 *Illinois Law Review* 449 at 460 comment with regard to similar subsections of the 1918 act: "This is the first of the sections in which the creditor is prohibited expressly from resorting to remedies made available to him by the terms of the contract; he is required to get the leave of court before exercising his summary rights. The purpose of this section is to assure dependents of persons of small means that they will have time in which to work out their difficulties. It is estimated that the rent for three months is a fair average of annual profit derived from the rent of a small dwelling, and that no harsh burden is cast upon a landlord who is required to wait

(*Footnote 7 continued on page 461*)

The act also permits either the Secretary of War or the Secretary of the Navy to assign a reasonable part of the pay of those in military service to cover rent for the premises occupied by their dependents (§300(4)). This provision was, no doubt, considered necessary to supplement the other provisions, as there might be cases where a soldier could, but would fail to so allot his pay. The possibility of landlords obtaining such allotments should tend to make them more lenient in allowing shelter beyond the maximum three months provided in the act.

B. Real Estate Contracts. Property sold on installments on which a deposit or installment was paid before October 17, 1940 (i.e., the date of the President's approval of the act) and before the purchaser has entered military service cannot be repossessed for non-payment of installments during this service except by court action. The court in such action may order the repayment of installments already collected as a condition for termination of the contract and for repossession of the property, or it may stay the proceedings or make some other equitable disposition of the case:

"No person who prior to the date of approval of this Act has received, or whose assignor has received, under a contract for the purchase of real or personal property, or of lease or bailment with a view to purchase of such property, a deposit or installment of the purchase price from a person or from the assignor of a person who, after the date of payment of such deposit or installment, has entered military service, shall exercise any right or option under such contract to rescind or terminate the contract or resume possession of the property for non-payment of any installment falling due during the period of such military service, except by action in a court of competent jurisdiction. *Provided*, that nothing contained in this section shall prevent the modification, termination, or cancellation of any such contract, or prevent the repossession or retention of property purchased or received under contract, pursuant to a mutual agreement of the parties thereto, or their assignees, if such agreement is executed in writing subsequent to the making of such contract and during or after the period of military service of the person concerned." (§301(1).)[8]

A real estate vendor-creditor is prevented by this section from using any summary remedy provided in the real estate contract which authorizes him to retake the property without an action in court. Also, with installment payments as with rents, the court may stay proceedings to collect installments, if it deems the tenant unable to pay by reason of his military service (§301(2)). This section in particular has caused some flurry in real estate circles because of the large volume of land contracts now outstanding as compared with the last war period.[9]

C. Mortgages. The mortgage moratorium provided by the act applies only to obligations originating before October 17, 1940 (§302(1)):

"In any proceeding commenced in any court during the period of military service to enforce such obligation arising out of non-payment of any sum thereunder due or out of any other breach of the terms thereof occurring prior to or during the period of such service the court may, after hearing, in its discretion, on its own motion, and shall, except as provided in Section 303, on application to it by such person in military service or some person on his behalf, unless in the opinion of the court the ability of the defendant to comply with the terms of the obligation is not materially affected by reason of his military service—

(a) Stay the proceedings as provided in this act; or

(b) Make such other disposition of the case as may be equitable to conserve the interests of all parties." (§302(2).)[10]

Provisions similar to those for court-action foreclosure are made for sales under power of sale or under judgment entered on warrant of attorney.[11]

(*Footnote 7 continued from page 460*)

three months before regaining possession of his property and running the risk of losing that much rent. Again, the court is given a discretion to refuse even that much extension or to make an order for payment by installments." (Comments subsequently quoted from this article refer, of course, to corresponding provisions in the 1918 legislation.)

[8] Violation of this section is subject to the same penalty as violation of Section 300.

[9] See 7 *Freehold* 148 (Sept. 1, 1940).

[10] "The general effect of this section is also to prohibit the exercise of summary remedies granted by the contract and to require the mortgagee to go into court for his remedy. The section is, however, limited to property used by a soldier or sailor or by his dependents for business or dwelling purposes. This is on the theory that where the interests of a person in service are of the character that may be defined as investments there does not appear to be pressing need for protection; some sacrifices must be made, and it is thought that the duty of Congress to persons called into service will be accomplished if such person can be made to feel that their own homes and any small business upon which they are dependent are afforded some protection during the war." (Ferry, Rosenbaum, and Wigmore, *op. cit.*, pp. 461–2.)

[11] "No sale under a power of sale or under a judgment entered upon warrant of attorney to confess judgment contained in any such obligation shall be valid if made during the period." (§302(3).)

D. Taxes and Assessments. The tax moratorium provided for by the act applies to taxes and assessments, both general and special,

"falling due during the period of military service in respect to real property owned and occupied for dwelling, agricultural, or business purposes by a person in military service or his dependents at the commencement of his period of military service and still so occupied by his dependents or employees." (§500(1).)

The provision with regard to the tax moratorium is as follows:

"Then any person in military service, or any person in his behalf, shall file with the collector of taxes, or other officer whose duty it is to enforce the collection of taxes or assessments, an affidavit showing (a) that a tax or assessment has been assessed upon property which is the subject of this section, (b) that such tax or assessment is unpaid, and (c) that by reason of such military service the ability of such person to pay such tax or assessment is materially affected, no sale of such property shall be made to enforce the collection of such tax or assessment, or any proceeding or action for such purpose commenced, except upon leave of court granted upon an application made therefor by such collector or other officer. The court thereupon may stay such proceedings on such sale, as provided in this Act, for the termination of the period of military service of such person." (§500(2).)

With respect to redemption the act states:

"When by law such property may be sold or forfeited to enforce the collection of such tax or assessment, such person in military service shall have the right to redeem or commence an action to redeem such property, at any time not later than six months after the termination of such service, but in no case later than six months after the date when this Act ceases to be in force; but this shall not be taken to shorten any period, now or hereafter provided by the laws of any State or Territory for such redemption." (§500(3).)

The act furthermore restricts the penalty which may be charged:

"Whenever any tax or assessment shall not be paid when due, such tax or assessment due and unpaid shall bear interest until paid at the rate of 6 per centum per annum, and no other penalty or interest shall be incurred by reason of such non-payment. Any lien for such unpaid taxes or assessment shall also include such interest thereon." (§500(4).)

E. Rights in Public Lands. The rights of anyone in military or naval service to lands owned or controlled by the United States will not "be forfeited or prejudiced by reason of his absence from the land or his failure to perform any improvements thereon or to do any other act required by or under such law." (§501(1).) In fact, military service is made equivalent to residence and cultivation of a homestead (§502) and to labor on a mining claim (§505(1)).

It is provided further that death, while in military service, of an applicant for homestead entry "shall be construed as equivalent to a performance of all requirements as to residence and cultivation upon such homestead or claim" (§503(1)), and that an incapacitated person, who is unable to return to his land but who is honorably discharged, is entitled to a patent to his homestead without further residence.

Persons in military or naval service may also suspend operations under federal mineral leases (§506(1)).

F. Stay of Judicial Proceedings. In addition to the above sections of the Civil Relief Act, which relate specifically to real estate instruments and taxes, there are, of course, the more complicated sections relating to the stay of judicial proceedings in general. Section 200 begins by providing that:

"In any action or proceeding commenced in any court if there shall be a default of any appearance by the defendant, the plaintiff, before entering judgment shall file in the court an affidavit setting forth facts showing that the defendant is not in military service."[12]

Subsection (3) of Section 200 further provides that, if by this affidavit or in any other manner the court learns that the defendant who is not represented by counsel is a soldier or sailor, an attorney may be appointed to represent him and protect his interest. In this way the court, in its discretion, may proceed

[12] "It is estimated that in not more than 15 per cent of all actions commenced can judgment be taken for default of appearance; in a very large proportion of these the plaintiff will be able without difficulty to swear that that the defendant is not a soldier or sailor. In those cases this requirement can not be objected to. Again, in a large number of the remaining cases the plaintiff will know definitely that the defendant is a soldier or sailor; in those cases it will be his duty, in his effort to obtain a valid judgment, to ask the court to appoint an attorney to represent the absent defendant. The only hardship for plaintiffs, therefore, will occur in those cases where the plaintiff really does not know whether or not the defendant is a soldier or sailor; in those cases also he will have to ask to have an attorney appointed for the defendant, if he wishes to protect himself against the possibility of the judgment being opened (under sub-section 4) after the return of a defendant who in fact is a soldier or sailor. It is considered that, as it applies to a very small proportion of all cases commenced, this is no undue hardship, in view of the benefits bestowed upon absent soldiers and sailors." (Ferry, Rosenbaum and Wigmore, *op. cit.*, pp. 456–7).

to hear and determine an action against a soldier or sailor when on duty.

An additional protection is provided by subsection (4) of Section 200 to the effect that, until 30 days after the death or discharge of a soldier or sailor, any judgment rendered against him during his absence, without a real defense, may be opened by the court upon a proper showing. Still further protection is afforded soldiers and sailors on duty by subsection (1) which requires the plaintiff to furnish security for restitution before being permitted to take defendant's property in execution, if it is shown on behalf of a soldier or sailor defendant who is absent that the plaintiff is irresponsible.

Sections 201, 202 and 203 give a court power in any case, on its own motion, to stay a proceeding or execution on a judgment. If application is made on behalf of the soldier or sailor defendant, the court is required to grant a stay, unless it believes the defendant is able to pay.

One of the most important sections in the act is Section 204:

"That any stay of any action, proceeding, attachment, execution, ordered by any court under the provisions of this Act may, except as otherwise provided, be ordered for the period of military service and three months thereafter or any part of such period, and subject to such terms as may be just, whether as to payment in installments of such amounts and at such times as the court may fix or otherwise."[13]

This section is specifically referred to in every place in the act where a court is given power to grant a stay at any stage of any kind of a proceeding.

G. Statutes of Limitation. Section 205 extends, for the period of military service, all statutes of limitations, federal and state:

"That the period of military service shall not be included in computing any period now or hereafter to be limited by any law for the bringing of any action by or against any person in military service or by or against his heirs, executors, administrators, or assigns, whether such cause of action shall have accrued prior to or during the period of such service."[14]

IV. Constitutionality of the Civil Relief Act

The reason for having an act such as the Soldiers' and Sailors' Civil Relief Act presented to Congress as an act to be passed by it rather than by the various states is stated by Secretary of War Baker and Secretary of Navy Daniels in their joint letter of September 1, 1917 to Congress, urging passage of the original Soldiers' and Sailors' Civil Relief Act of 1918. In substance they argued for a federal enactment on the ground that Congressional powers are ample to embrace such legislation, whereas the separate states have no war powers and are also limited in their ability to impair obligations of contract.

Under these so-called "war-powers," granted to Congress by the Constitution,[15] federal district and state supreme courts were uniform in upholding the constitutionality and effectiveness of the Soldiers' and Sailors' Civil Relief Act of 1918 during the period of its previous operation.[16]

V. Conclusion

This type of legislation seems to meet with general approval. At least no widespread and violent protests seem to be resounding from real estate and mortgage lending circles. The same was apparently true in 1917–18, for a search of the literature of that period shows little comment on the subject. In fact, a few instances were found of real estate dealers anticipating the relief measure by granting exemptions or postponements to soldiers and sailors prior to enactment of the federal law.[17]

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[13] "It should be noted that by this section the stay may be made to extend either for the entire period of service or for any shorter period, in the discretion of the court." (Ferry, Rosenbaum and Wigmore, *op. cit.*, pp. 458–9.)

[14] "A provision to this effect is familiar in the war legislation of almost every American state at the time of the Civil War. The section here drafted seeks to express in the fewest possible words the various benefits which the old war legislation created in this regard." (Ferry, Rosenbaum and Wigmore, *op. cit.*, p. 459.)

See *Wenatchee Produce Co. v. Great Northern Ry. Co.*, 271 F. 794 (1921), which held that Congress may, as a war measure, extend the period of limitation fixed by the laws of the several states.

[15] Const. of the U. S., Art. I, §8.

[16] See *Wenatchee Produce Co., v. Great Northern Ry. Co.*, 271 F. 784 (1921); *Pierrard v. Hoch*, 191 P. 328, 97 Or. 71 (1920), reversing on rehearing 184 P. 494, 97 Or. 71 (1919); *Kiehn v. Neagebauer*, 216 S. W. 259 (1919); *Konkel v. State*, 170 N. W. 715, 168 Wis. 335 (1919); *Clark v. Mechanics' American National Bank*, 282 F. 589 (1922); *Erickson v. Macy*, 231 N. Y. 86, 131 N. E. 744 (1921), reversing 185 N. Y. S. 926 (1920); *Hoffman v. Charlestown Five Cents Sav. Bank*, 121 N. E. 15, 231 Mass. 324 (1918).

[17] *National Real Estate Journal*, 1917, p. 515.

Off-Street Parking: A City Planning Problem

I

WITH the rapid growth of automobile traffic in recent years, city planning has been faced with a number of new problems. Old streets had to be widened in order to accommodate the increasing number of cars. New streets and highways had to be constructed to enable the cars to develop full speed. However, all these extensive activities in street widening and highway construction have proved to be insufficient to relieve traffic congestion in the downtown sections or to improve traffic flow along the main thoroughfares within the city at large.

By study and observation it has been found that the problem of keeping the cars on the move is definitely related to the question of where to put them when they come to rest. It has been discovered that car parking along the curb causes most of our traffic troubles by narrowing the paved space of the public street or by disrupting traffic flow. It has also been found that street widening projects, often coupled with the loss of valuable trees, are hardly justified when the space so gained is afterward given over to the storage of cars. The paved street, in fact, is much too expensive to have its space used for standing cars. Some years ago the city of Pittsburgh widened Grant Street in the downtown area from 36 to 50 feet, thus providing two additional traffic lanes. The cost of this improvement was $1,860,340. If the additional lanes are used for parking, only 144 parking spaces can be provided, making the cost of this public parking area per car space $13,302.[1]

No doubt, a great many of our present traffic problems would be solved if curb parking were reduced to a minimum. New York City has recently made regulations prohibiting curb parking entirely in a number of main cross streets—regulations that apparently have proved very successful in speeding up through traffic. In other cities similar attempts have been made to restrict parking time by police regulation or other devices, such as parking meters, etc.

From a recent survey of traffic conditions in representative American cities, the American Automobile Association finds that, by various attempts to increase the efficiency of building rather than street use, the legal parking space at the curb in central districts has been decreased sharply (in some cities by 1/2) in the past 10 years.[2]

II

However, if we prohibit street parking, we have to provide for off-street parking facilities.

For some time, far-sighted shopkeepers have recognized the advantages of providing parking facilities for their customers. The Sears Roebuck people, wherever they build a new store, try to integrate off-street parking with shopping facilities. For the location of their new department store in Buffalo, for instance, the firm, following its experiences in other cities, has taken the risk of going completely out of the central business district to a site three miles from Lafayette Square. In spite of the mocking of downtown business men, they built their department store on land, the price of which was low enough to allow for the setting aside of a large parking area. Apparently, the convenience offered to the customers was enough to make up for the supposed disadvantages of the unusual location and to secure successful competition with downtown business.

In these experiments of private enterprise, the way is indicated for a definite solution of the parking problem. As pointed out in the report of the American Automobile Association mentioned above, most merchants who provide parking accommodations for their customers agree that the cost is returned in increased business and good will. On the other hand, it seems to be the general consensus of real estate boards and planning officials that traffic congestion, lack of terminal facilities, and inaccessibility have been the causes of a serious decline in property values in central business districts—a decline resulting in increasing losses of tax revenues to the cities. To quote from the report: "It is probably the major cause for the loss of retail trade in concentrated

[1] See "The Parking Problem in Central Business Districts," *Publication No. 64*, Public Administration Service (Chicago, 1939), p. 17.

[2] See "Parking and Terminal Facilities," *Report* prepared by Safety and Traffic Engineering Dept., American Automobile Association (Washington, D. C., March, 1940).

midtown areas and the consequent gain to suburban retail business."

Confronted with such a situation, we may expect that within the near future the provision for off-street parking facilities will be considered as a municipal responsibility, including the possibility of municipal ownership in some cases. New regulations will be considered for inclusion in our building codes. According to such regulations, building permits for structures which normally attract a great number of people, such as apartments, movie theaters, music halls, department stores etc., will be granted only on condition that a proportionate space for parking is provided on the building site. It will also become obligatory for the city planner to set aside in advance in his land-use maps areas for off-street parking and to prepare for their orderly arrangement by providing entrances and exits where they do not interfere with through traffic.

In attacking this problem, the city planner may be best guided by watching and following the trends revealed in recent urban development. In recent years, more buildings have been torn down in the business districts of our cities than have been newly erected. Since the owners were not able to meet the taxes, based on the assessed values, they tore down their buildings—some of them still of rather substantial character—and used the vacant lots for parking space. As a rule, these parking lots, which are supposed to be used only temporarily for this purpose, lack any improvement. Scattered all over the business section, they become eyesores in the heart of the city, bringing about the decline of other property values in their vicinity while the owners, in fondest expectations of another land boom, are still waiting for the possibility of more intensified uses.

For Buffalo, a local study of recent demolition trends shows the following conditions: In 1935, 26 buildings in the inner district with an assessed valuation of $236,690 were demolished; in 1936, 8 major structures with an assessed value of $75,220 were razed; in 1937 demolition took away 10 buildings and an assessment value of $29,206; in the first three months of 1938, 6 buildings which were torn down represented an assessed value of $26,820. Over a three-year period 50 buildings in the central district with a total assessed value of $370,936 were demolished. In comparison we find, in the same period of time, only five new structures erected in the central district. The total assessed value of the new construction is estimated at about $97,000, as compared with the demolition figure of $370,936.

The demolished buildings ranged from private dwellings to hotels, warehouses, small office buildings, and general business establishments. In every case examined, the vacant property has been given over to a parking lot, or service station, or combination of the two. (From 1934 to 1938, 16 gasoline stations have been established in the central district.) Diagram I shows that at present the area for parking lots has increased from 4% of the downtown area in 1932 to 13% in 1940.

III

As to the location of these parking lots, a study prepared by the Safety Commission of the Police Department during the latter part of 1937 (WPA Project No. 46797—Traffic Survey) shows a total of 96 parking lots in the central district. It is certainly not by accident that most of the vacant lots used for parking purposes are located around the main shopping center, along the two streets paralleling Main Street. All along both Franklin and Ellicott Streets, over a great number of blocks, the building line is just punched with holes—a condition presenting a very disorderly and unsightly aspect.

Following the trend of this development, the Buffalo Planning Research Station[3] worked out a project suggesting that these two streets should be developed into service streets (Diagram II). The project provides for widening these streets on both sides by addition of a strip of land (now including many vacant sites) to be given over to off-street parking, these parking areas to be kept in public ownership and maintained by the city as part of its street system.[4] The two service streets will be easy of access from a circumferential route surrounding the inner business district.

The advantages of such a system of service streets will bring to downtown shoppers

[3] An institute jointly sponsored by the University of Buffalo and the Buffalo City Planning Association, Inc.

[4] The vacant lots involved in this project are now in private ownership. Their acquisition for parking purposes will be by purchase or by the city's taking title in cases where taxes are far in arrears.

and theater goers abundant parking facilities within convenient walking distance of about 500 feet from Main Street.

This arrangement of off-street parking facilities will help to bring in more light and air into the densely built up areas in the downtown section and relieve the congestion frequently encountered in these older parts of the city. An arrangement of that kind will also help to develop the off-street parking stations into a permanent institution and, thereby, to improve their appearance and to overcome their present makeshift quality. The strip of land used for parking may be screened off from the street with a row of trees.

It is open to discussion whether the main beneficiaries of such an improvement should be taxed to a certain extent as a contribution to the cost of this redevelopment scheme, or whether the city should lease the land to be used for parking purposes to a private company. Anyway, the city administration should be able to maintain control on the

Diagram I

GROWTH OF OFF-STREET PARKING SPACE IN DOWNTOWN BUFFALO
1932, 1934, 1940

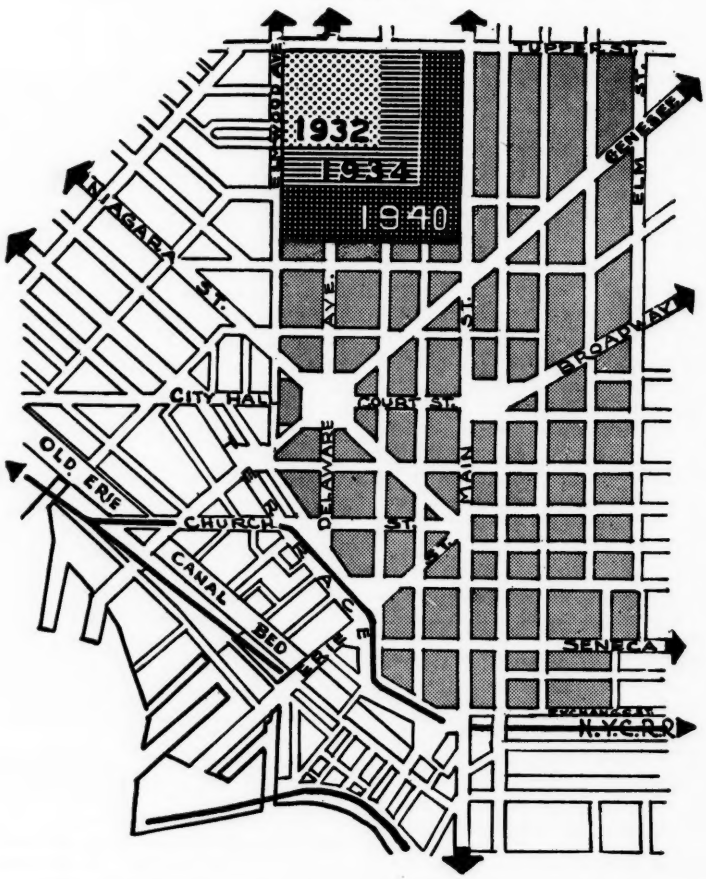
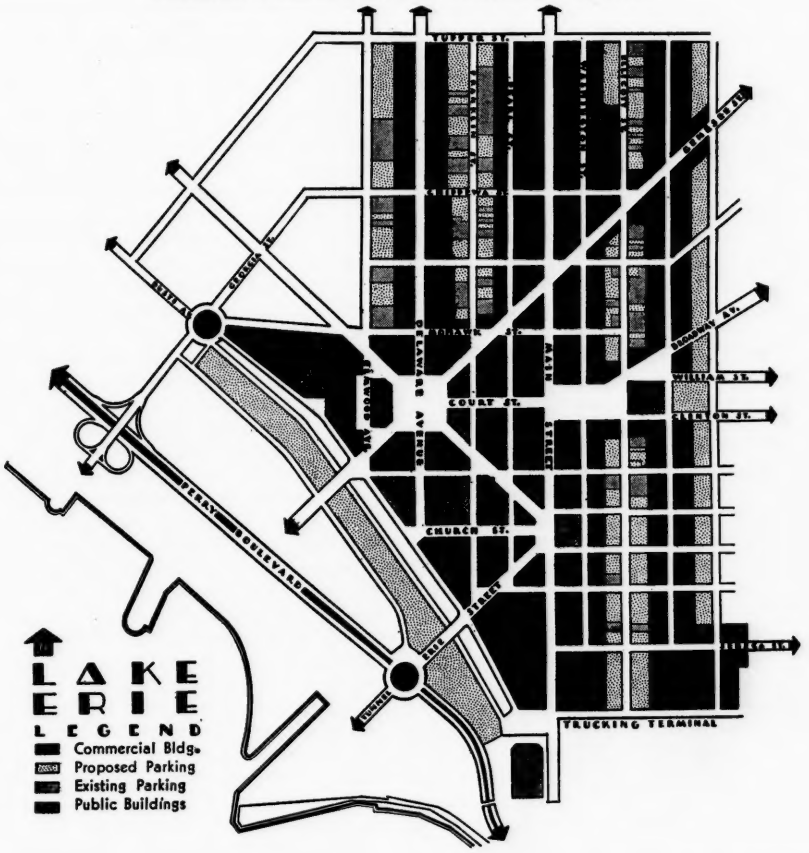


Diagram II

SUGGESTED PARKING PLAN FOR DOWNTOWN BUFFALO



cost of storage fee. In general, as indicated in recent reports, these fees are so high that, at present, the available off-street parking space is not fully used.

Another obstacle still remains to be overcome, if off-street parking is to be introduced as an effective means to remedy our present traffic troubles. The opinion is widespread among shopkeepers that customers will not patronize their stores if they are not allowed to drive up and park their vehicles at the curb, right in front of the store's doorsteps. With the increased use of the private automobile it will become more and more impossible to grant such a privilege to individual owners. It can no longer be considered an undue handicap to the shopkeeper if the customer is asked to walk a short distance to his destination. Experience has shown that the average person is perfectly willing to put up with such an inconvenience and to walk a few blocks if, in compensation, he is provided with conveniently accessible and reasonably priced off-street parking facilities.

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Social Security: A New Consideration in Submarginal Land Policy

FOR nearly a decade both state and federal programs have followed a policy of dedicating lands submarginal for agriculture to uses that do not require year-round, in-place residence. This policy has aimed at two basic objectives: to save people from "breaking their hearts, backs and pocketbooks" in trying to wrest a living from land that cannot be made to yield a living; and to remove or keep families from isolated locations which require unusually high costs of local government service.

It has been more or less recognized that all back-area problems do not fit into this concept nor into the programs adopted for it. There are some people living in isolated submarginal areas who are not trying to make an income from the land. Among these are certain part-time farmers whose jobs do not require residence in closely settled areas and some retired persons living on savings, gifts, or private pensions.

For some time, however, there have been others in many poor land areas, who live in worse circumstances and yet who have not been trying to farm. These are the unemployed, who, lacking cash to pay city rents and to live according to their customary urban standards, have been hiding out, so to speak, in improvised shacks and once-abandoned farm houses. The small pools of rural poverty which they comprise meet most of the outward criteria for designating areas to which the current submarginal land policy should be applied. The land they occupy would classify as submarginal for agriculture in terms of physical quality, location, or apparent economic returns. The houses are poor, public relief may be extended, public service problems may be severe, ownership tracts are small, and tillable land is practically nil. The only difficulty is that the people involved are not trying to become farmers, and cheap land, even if completely impossible of cultivation, is the thing most needed.

This type of situation has been revealed in studies in New Hampshire, Connecticut, Indiana, Michigan, and Wisconsin and has seemed to appear just out of focus in numerous other reports. Even where recognized, however, it has been thought that such a pattern of submarginal land utilization is, after all, sporadic, and that a revival of industry would remedy the problem. The point of this paper is that this type of submarginal land problem, heretofore regarded as exceptional, may have been given greater substance, permanence, and direction during recent years than land economists realize. The impetus has arisen from the probability of some permanent unemployment and from the growing importance of old age groups, and has taken form in programs of relief, old age assistance, and old age insurance.

We now, as a nation, more or less take it for granted that even with a return of full business activity, a "hard core" of unemployment will remain. This group is partly composed of middle-aged people who have been unemployed and who can now be more conveniently replaced by new arrivals in the employable age group than they can themselves be rehired and retrained. A large number of the depression back-to-the-landers are probably now in this group. Others who are in this group, but who are not now on the land, may also locate in these poor land areas. For all of them, the provision of public aid is a patent expectation.

Others of our depression jobless have since grown too old to work. For this group, a special joint federal and state program of old age assistance has been established on a permanent basis. Already some two million persons are obtaining aid under this system and, as others reach age 65, they too may share in its benefits.

In addition, there are now some forty million people in this country who are covered under the federal old age insurance plan. As these people reach age 65, they will be automatically entitled to a monthly old age pension income.

Even in a very cursory consideration of these security programs, the rural land economist should notice that a tremendous number of people are affected by these programs,

that the incomes received from them are modest, and that the payments (especially under old age insurance) are assured.

There are logical reasons for expecting that a considerable number of the recipients of these funds will choose to live in areas submarginal for agriculture. First of all, living costs for them, as for the depression back-to-the-landers, will be cheaper. Many purchased goods will be less expensive, and certainly the cost of home sites will be. Second, not only will the unit prices of many purchases be less, but the number of them may be fewer. To the extent that back-area communities impose less rigid standards of consumption, adjustments in this direction can be made with less loss of social prestige than if they had to be made in the neighborhood of the pensioner's former employment and residence. This advantage will be particularly important in respect to housing. Finally, poor land areas hold other attractions besides cheap living. If our city populations are maintained by farm-to-city migrants, it seems reasonable to expect that a large share of urban workers will retire into the country just as a number of city-to-part-time farm migrants were originally farm-to-city migrants. To the aged person deciding on his place of retirement, there may be no stronger points of decision than economy of living, avoidance of embarrassment, and good fishing.

This reasoning is largely conjectural, for obviously substantiating facts are extremely limited. Scattered observations and random notes lend it some support, however. The results of research in part-time farming, particularly that dealing with the depression phases of the back-to-the-land movement, are in point. Apparently a little reorientation of some of our submarginal land studies would also provide a check. Most striking to the writer has been field observation and discussion with informed people in certain parts of the Northeast, Central, Lake States, and Pacific Coast regions in which may be found communities that are locally characterized as settlements of pensioners. In these areas, too, there is growing concern as to the number of "unemployables" in poor land areas. The Bureau of Agricultural Economics report on irrigation in the Great Plains region is to include a section on retirement homes for aged couples. The development of interest in a rural works relief program may be a part of the increasingly frequent references to "submarginal people on submarginal land." Occasional reports are heard as to the closing of county poor farms. All these random comments may actually be reflecting a basic thread of unity, the implications of which yet need to be recognized fully.

If there is any real chance that the relationship between national security policy and submarginal land policy is as close as this reasoning would make it seem, the land economists and social security experts need to give joint attention to these possibilities soon.

It is highly probable that the effect, if any, of the security programs mentioned will vary. For example, the old age assistance program is state administered, is handled on a case basis, and is only for the needy. Since it is state administered, a certain minimum residence in the state is usually required (but cannot exceed five years in the past nine nor more than one immediately preceding year). This feature would tend to reduce interstate movement of the recipients. Since the payments are determined on an individual needs basis, regulations with respect to property ownership might also tend to discourage the movement of recipients within the state to new, even though less expensive, home sites. Further, the grants allowed are low, are often limited to $40, and average about $20 per month per person or about $35 per month for an aged couple.

In contrast, the old age insurance program is federally administered, so there are no restrictions as to residence, and thus, to interstate movement. Furthermore, the insurance benefits are paid automatically and are not dependent upon the actual needs of the recipient. Persons with other means can, therefore, use such resources (as in buying a home-site) without affecting the receipt of their pensions. Finally, the amounts paid will have a wide range, but they will probably increase on the average over time, and will tend to be higher than the assistance payments.

In both the old age assistance and the insurance plans, the benefits paid are modest but they are assured. The former is the more important right now, but the latter plan, with 40 million members and with few restrictions, is the more potentially significant.

Returning to the two basic aims of current submarginal land policy, it is clear that the

desire to spare people from futile attempts to farm poor land has little relevance to the possible implications of the security programs discussed. To the extent that settlement on poor lands is undertaken by security-program beneficiaries, assistance in clearing or otherwise improving the land would hardly be a question. Nor will there be any problem of finding good farm lands for resettlement purposes. We would certainly need to use caution in our interpretation of those statistics (such as the proportion of census-defined farms with a certain limited total production) that are commonly used or misused in land-policy discussion.

If these relief and pension recipients locate in back-areas, might we not hold to our current policies in so far as they are aimed at eliminating or preventing unusually high local government costs? Clearly we cannot answer this question with a broad negation, yet even an affirmative answer may need important qualifications. Immediately, it can be seen that the establishment of these programs, and even of the level of benefits paid under them, has been made a matter of national decision. If these decisions should encourage or force the beneficiaries, for their happiness, health, or welfare, to move into locations which produce local governmental problems, can it be assumed that the solution of the difficulty is a matter of purely local concern? If these people move to socially uneconomic sites and if their assets are very low in taxable value, then to the extent that other people in the locality or state bear the local tax burden, we may say that they are also carrying a part of the weight of the national security program. In any event, if police power or purchase is used locally to keep the newcomers out, unfair hardships may be put upon them, or at least the action would be in effect a modification of security policy.

These are now very "iffy" questions, and it would be easy to overdraw their probable significance. But too often we study things that have happened rather than things that are about to happen. To do the latter requires that we begin to check, at least in a rough way, such observations as may be germane to tentative hypotheses. If preliminary reconnaissance tends to verify the proposition, a more formal and concerted attack should be planned.

The suggestions made here are in every sense provisional. It seems, however, that if the idea has validity, the potentialities both for land policy and for social security policy may be great. The possible implications which have been mentioned are stated simply to illustrate the type of general movements which may be obscured now by unsystematized and localized observations.

As an immediate and practical matter, the writer would appreciate word from any reader who may have had an opportunity to note any developments in the field which would tend to deny, affirm, or modify the possible tendencies sketched in this paper. A speedy but informal compilation of such notations could indicate whether the suggestion for a more complete study is warranted and, if so, would be made available as a basis for planning further work.

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Policy for Use of State-Owned Land in Arkansas*

HISTORICALLY, the policy for use of state-owned land[1] in Arkansas offered three alternatives: (1) acquisition by individuals and corporations through redemption for back taxes, plus penalties and costs of forfeiture; (2) sale at $1 per acre; and (3) donation, which is a method of homesteading. In 1939 a new policy was inaugurated under Act 331 passed by the regular session of the Arkansas General Assembly. Before any of these steps may be taken for disposing of the land, this Act provides for classifying state land according to its agricultural and timber possibilities when operated under individual or corporate ownership, and on the basis of this classification certain lands are to be withheld from sale or donation. Certain conditions have been established for lands that are open to sale or donation. The Act provides (1) that a conservative market

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[1] The term "state-owned land" as used throughout this discussion applies to land that was tax delinquent for two years, after which it was certified to the state and became "state-owned."

value be affixed to state-owned land offered for sale and (2) that the area donated be adjusted to the requirements of an economic-sized farm unit. Furthermore, mineral rights are reserved by the state to all state-owned lands which are sold or donated. Redemption rights were not altered by this legislation, but remain the same as under earlier statutes.

Effect of Earlier Policy for Alienating State-Owned Land

Prior to 1939 the policy in alienating state-owned land in Arkansas centered on restoration of the land to the tax rolls without regard to its quality or possibilities for proper utilization under private or corporate ownership.[2] The extent of redemptions may be shown by data for the 10-year period, 1928–37, when 1,368,542 acres of land were redeemed from the state of Arkansas.[3] During this period the cost of redemption was determined by the amount of penalties and costs due at the time of the tax sale plus the taxes for that and all subsequent years. However, 32.1% of the above acreage was redeemed under "bargain redemption legislation," passed and in force in 1933 and 1934, which permitted redemption for one year's back taxes; and 16.0% was redeemed for two years' back taxes under Act 18 of 1935.

During the same 10-year period sales of state-owned land amounted to 1,001,028 acres, all of which were sold at the rate of $1 per acre plus $1 for the cost of the deed. This land was alienated without regard to its quality or to the area needed by the purchaser for farm operations.

Donations provided a third method for alienating state-owned land. The requirements of the donee for donation of state-owned land are unchanged under the new policy except that the donee is required to be the head of a family and to have been a resident of Arkansas for at least five years. The donee is required to submit to the Commissioner of State Lands an application for donation of a definitely described area. If the application is favorably considered and the land is available for donation, the donee is granted a certificate of donation. The donee is required (1) to live on the land three years, (2) to clear, fence, and place in cultivation at least five acres, (3) to pay taxes on the area under donation, and (4) not to remove timber except as needed for farm use. At the end of the three years, the donee requests the clerk of the county in which the donation is located for an affidavit stating that the donee has complied with the requirements for donation. This affidavit is presented to the Commissioner of State Lands who grants a donation deed, unless the previous owner of the tax-forfeited land has filed suit to recover title to the land, in which case the deed is withheld pending outcome of the case.

Applications for donation of state-owned land during the period 1928–37 amounted to 814,096 acres. However, acreages involved in donation applications did not necessarily pass finally from state ownership. For example,

> "Total applications for donations filed in 1927 amounted to 61,527 acres, but deeds were granted for only 32% of this amount by January 1, 1934. The 1928 applications totaled 46,092 acres, of which 39% was deeded, while the 1929 applications totaled 52,559 acres, of which approximately 40% had deeds granted by January 1, 1934."[4]

The earlier donation method of alienating state-owned land proved to be relatively inefficient because of the failure of donees to fulfill the requirements for receiving donation deeds. The method invited speculation in land, exploitation of timber on donated areas, and did not consider the quality of the land or area donated in relation to requirements for an efficient farm organization.

Classification of State Land Provided

Act 331 of 1939 provides that the Commissioner of State Lands[5] may request "in-

[2] The new policy for use of state-owned land in Arkansas does not change the provisions whereby land may be reclaimed by prior owners, their heirs, or others having equity in the land. Earlier statutes provide redemption by payment of penalties and costs due at time of sale plus the taxes for that and all subsequent years.

[3] See *Ark. Agr. Expt. Sta. Bul.* No. 370 for a relatively complete discussion of operation of the earlier policy for use of state-owned land in Arkansas.

[4] *Ibid.*, p. 20.

[5] The Arkansas Constitution of 1874 under Article VI states that "... the General Assembly may provide by law for the establishment of the office of Commissioner of State Lands." This is an elective office with a two-year term. The Commissioner of State Lands is secretary of the Land Use Committee of the State Planning Board.

spection, classification, and appraisal of state-owned land" by the Land Use Committee of the State Planning Board and other state or federal agencies qualified to perform this function.[6] Tax-forfeited land may be classified (1) as agricultural lands, suited for donation or sale or for retaining in public ownership but allocated for agricultural settlement, and (2) as non-agricultural lands which include land that might become suitable for agricultural use when the timber cover improves or by reclamation and land that should be withheld from sale or donation. A third classification which may include land from either of the above classes is provided under Section 6 of Act 331 which states that the Commissioner of State Lands

"... may enter into sale contracts, sell, deed, purchase, exchange, lease or dispose of lands with or without consideration and waive rights and priorities in such manner and under such conditions as may be required by the United States or agencies of the United States, and agreed upon by the State Land Commissioner, in order to effectuate ..."

better land utilization. The purpose of classifying state-owned land is to direct the effort of many hopeful donees or purchasers of state land to the more desirable acreages where their labor may be used in establishment of a homestead and where they would not be predestined to failure by working unproductive land.

When land is classified as not suited to private or corporate ownership and operation, the statute provides that the state will withhold such lands by refusing to consider application either for donation or purchase.[7] Tracts so classified may be set aside for public forests, parks, or for other purposes.[8] However, state-owned land which is not suited to agricultural development and which is withheld from sale or donation may be reclassified or reappraised after three years and disposition made according to the last classification.

The Commissioner of State Lands is empowered to make contracts and other arrangements for development of lands withheld from sale or donation when the tracts are classified "as lands which could be made suitable for agriculture through further development" with reasonable cost. In addition, the Act provides that the Commissioner of State Lands be empowered to "investigate and recommend possible methods of financing the cost of such development, and may request the aid of other agencies, State, local, and Federal, in such investigations."

One section of the Act provides for the state to exercise its ownership and to prevent state-owned land from being exploited by prior owners of unredeemed land and by owners of land adjacent to state-owned tracts.

Land reserved by the state as not suitable for sale or donation may be protected from fire and timber trespass by proceeds from the sale of state-owned land which is credited to the State Land Fund.[9]

Sale Price Adjusted to Market Value

The new policy for use of state-owned land in Arkansas provides for sale of tax-forfeited lands at an appraised value. Such tracts may be purchased either by those owning no land or by owners who wish to increase the size of their farm units. However, sales will not be made if the acreage, including land purchased from the state,

[6] Section 3 of Act 331 empowers the Commissioner of State Lands to accurately locate, describe, and quiet title to the state for tracts of state-owned land carrying faulty or partial descriptions. Section 5 of the Act states that "State lands shall be classified as to whether they should be retained in public ownership, allocated for agricultural settlement ... or returned to private ownership through sale or donation. ..."

[7] The type of application received by the Commissioner of State Lands would determine if the land would be classified by the Land Use Committee for donation or for sale. Land is classified as applications are considered. It should be pointed out that the coal, oil, gas, and mineral rights are reserved by the state on both donated land and land sold at an appraised value.

[8] Section 2 of Act 331 provides that the Commissioner of State Lands may "assign lands to the several State agencies for administration, subject to their agreement and acceptance."

[9] Act 331, Section 11, states that proceeds from sale of state-owned land are "... deposited with the State Treasurer to the credit of the State Land Fund, to be used as follows: First, for the necessary expenses of the State Land Commissioner and of the State Planning Board occasioned by the duties imposed by this Act; second, for the protection of State-owned lands from fire and from timber trespass as shall be provided by law; and, third, for the necessary expenses of agencies cooperating with the State Land Commissioner and expenses occasioned by such cooperation. Any remaining funds, which represent a surplus above the prospective needs for the administration and protection of state lands, shall be transferred to the Permanent School Fund of the State of Arkansas."

would exceed a family-sized farm.[10] State land may be sold when the purchaser desires to use it for a farm woodlot.[11]

All sales of state-owned land are to be made at an appraised value determined by inspection of the tract by personnel working with the Commissioner of State Lands and the Land Use Committee of the State Planning Board. The Act states that "the Commissioner of State Lands shall offer the land for sale to the highest bidder, provided his bid is at least equal to the appraised value, and thereafter no land shall be sold for less than its appraised value."[12] Actually, the appraised price is typically the sale price because competitive bidding seldom occurs.

An appraised value of state-owned land in Arkansas must necessarily consider a large element of speculation because the state has a clear title to only a relatively small amount of land certified because of tax delinquency. Consequently, the market value of land carrying a questionable title is affected by the possibility that the title may be set aside. For this reason the general method of appraisal starts with the value of the land, assuming that it carries a clear title. From this value is deducted the estimated cost of defending the title if challenged and an additional deduction for the speculative element occurring because the title might be set aside.[13] It is, of course, granted that this method falls far short of an accurate appraisal; however, it results in a sale price much closer to true value than the earlier rate of $1 per acre for all sales.

The new policy for state-owned land provides that both donation and sale deeds from the state for all land previously classified shall contain covenants or restrictions reserving for the state all coal, oil, gas, and mineral rights. Since the statute provides that land must be classified before these rights may be reserved, a tentative value of $1 per acre was placed upon all state-owned land, effective September 15, 1939, and these rights have been reserved on land sold by the state since that date. The importance of this provision may be indicated by the fact that thousands of acres of state-owned land were sold in southern Arkansas in recent years because of oil developments in that area.

Area Donated Adjusted to Needs of Applicant

Prospective donees are required to execute an application for donation which is submitted to the Commissioner of State Lands who is required to cause inspection and appraisal of the land sought, to verify the information submitted by the applicant, and to cause the applicant to be interviewed relative to the proposed donation. Personal contact with the prospective donee is helpful in showing the donee the extent of interest of the state in his application and in assisting the donee in adjusting the area sought to his needs for a farm unit. In addition, the donee is carefully considered as a personal risk and as to the seriousness of his intentions in obtaining donated land. Before this Act, much state-owned land in Arkansas had been donated for timber exploitation purposes.

Specifically, the Act states that

"The State Land Commissioner, with the advice of the Land Use Committee of the State Planning Board, shall determine the size of tracts which may be donated, and shall not permit the donation of an area larger than can be worked by a farm family, nor an area smaller than will produce an adequate living for a farm family, considering its location, fertility, and the type of farming which may appropriately be conducted upon it."

[10] The term "family-sized farm unit" necessarily is used loosely in administering the Act since information is not available for applying this term accurately to each local situation where state-owned land occurs. However, the general guide provided by the term is that sales shall be for one-family, farm-operating units with the intention that the area will be adequate, with proper management, to afford a respectable standard of comfort for the family operating the land.

[11] No applications have been filed by mill or lumber companies for purchase of relatively large areas of state-owned land. However, it is believed that, if or when applications for purchase of relatively large areas are received, the land would be offered for sale in large tracts to corporations for timber production.

[12] Acts of Arkansas, 1939, Act 331, §5.

[13] It should be pointed out that, when title to a tract purchased from the state is set aside, the purchaser may seek reimbursement from the state for the purchase price of the land. Act 269 of 1939 provides that, when state deeds are set aside, the person whose title is set aside shall be entitled to a lien (1) for the cost of the state deed which was based upon taxes, penalty, and costs for which the lands originally forfeited, (2) all taxes paid after acquiring state title, (3) improvement-district assessments paid, if any; and (4) interest at 6% per annum upon all such outlays. Act 269 was enacted before Act 331 and for this reason showed a lien for purchase price based upon taxes, penalty, and costs instead of an appraised value of the land as under Act 331.

The Act further provides that donation applications will not be approved for land in isolated settlements or where "the expense of extending roads and schools to isolated donees may prove burdensome to a county." However, if the land is believed to be suitable for agricultural production, the applications of a group of donees might be favorably considered for locations where there would be justification for maintaining roads and schools to serve a new community. The purpose of this section of the Act is to prevent ill-considered donations in certain areas and in units which are not adequate for the proper size of farm for the type of farming common in the area.

Another important feature of the Act is that land owners may increase the size of their holdings through the donation method so as to acquire sufficient acreage for economic operation, including donation of land for grazing purposes or for use as farm woodlots, without being limited to 160 acres per applicant, which was the maximum acreage prior to adoption of this Act.

Operation of the Act as applied to donations may be illustrated by two examples taken from the Mississippi Delta area of Arkansas. The first donation granted under the new statute was to an applicant desiring 40 acres of state-owned land upon which to establish a homestead. The report of the inspector indicated that this area would be adequate for a family-sized unit for the type of farming which the donee proposed to follow. The donee was interested in a live-at-home program of agricultural production and rural living. In fact, in 1938 he made a living for his family without the use of work stock through using a hoe for planting and cultivating his garden and truck patches, and with supplementary income from whatever public work he might find. It is interesting to note that the donee did not receive WPA employment or public assistance in 1938. He was an individualist and was anxious to get started on a tract of land where he could establish a home.

Another illustration of effectiveness of personal contact with prospective donees is shown by the applicant who desired to acquire 160 acres through donation. In this case, 80 acres appeared to be adequate for a family-sized farm unit. This was indicated to the applicant and also the danger of burdening the farm with taxes and improvement-district assessments from the additional 80 acres which could not be effectively used. The applicant changed the donation application from 160 to 80 acres.

The State-Land Policy and Clear Tax Titles

The present policy for use of state-owned land, although constituting a definite forward move in proper land utilization, is limited in its effectiveness by the failure of the state to have obtained titles to tax-forfeited and certified land from most counties and for most years of delinquency. Repeated attempts have been made to enact legislation to give the state a clear title to both tax-forfeited and certified land and a bill carrying these provisions failed by only a few votes of passing in the 1939 Legislature. Although it would have been highly desirable for such legislation to have been enacted before adoption of Act 331, this Act may be the cause of "clear-tax-title" legislation to be adopted later. It is believed that the present method of sale at a conservative market price and the constructive method of donating land will strengthen sentiment in favor of clear state-land titles.

In the past, speculators could purchase land for $1 per acre and, if the title "stuck," they would reap a "windfall." Sale at market value, however, may cause sentiment to shift toward support of giving the purchaser a clear title. If this change in sentiment occurs, by passage of Act 331, the Act will not only provide a desirable basis for selling and donating state-owned land along with reserving mineral rights, but also may become the basis for enactment of subsequent legislation for clear state titles. Legislation such as Act 331 of 1939 and "clear-tax-title" legislation are essential for successful operation of a policy for use of state-owned land in Arkansas.

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E. W. Morehouse, *Editor*

An Incentive Plan of Rate Adjustment*

THE settlement of the electric rate case of the Concord Electric Company negotiated by representatives of the company and the Public Service Commission of New Hampshire, to which this comment refers, constituted an interesting application of the sliding scale rate idea, which is believed to have possibilities of wider application in similar situations elsewhere.

This writer has long believed that the general dissatisfaction with the cost and delays of rate regulation through hearings carried to the point of establishing a fair return on the fair value of the property after adequate consideration of cost of reproduction new less accrued depreciation and of original cost was to a large extent justified. Such proceedings tend, in addition, to develop bitterness and ill feeling and to interfere with the development of desirable relations between utility companies, regulatory commissions, and the public. It has often seemed that it should be possible to bring about cooperation between companies and commissions in support of some form of automatic rate adjustment which would eliminate, at least for a reasonable term of years, the necessity of additional rate controversies; and at the same time hold out an opportunity for increased profit to the company as an incentive to devote its best efforts to increased economy of operation and to lowering the cost of service to consumers.

After all, the realities of financial income and protection of investments, like those of lowered rates for service, are of tremendously greater importance than theories of valuation, depreciation, and rates of return. From the point of view of the real interests involved it is of secondary importance what valuations and rates of return are fixed if stabilization of return on investment at a satisfactory level and reduction in cost of service to consumers can be brought about.

In this connection the sliding scale plans that have been tried out elsewhere, like the Washington Plan, have seemed to the writer to be subject to the criticism that they make reductions in rates dependent upon increase of net income above a predetermined level instead of making the permissible increase of income above a predetermined level dependent upon reductions in rates.

The plan of settlement adopted for the Concord Electric Company rate case seems to the writer to have been an attempt to develop this improved type of automatic rate-adjustment plan. The case itself had been initiated by the Public Service Commission of New Hampshire in March, 1939. Extensive hearings had been held and there were indications that the case was developing into just such a long drawn out proceeding, with opportunities for bitterness and ill feeling, as has already been referred to as undesirable and unsatisfactory from the point of view of all concerned. During the proceeding the commission had from time to time intimated that, if the matter were carried through to a final conclusion based solely upon technical legal presentations, the outcome might be an order reducing rates so as to yield a net return of somewhere from 5 to 6% on the net book value, or book cost less accrued depreciation, of $1,605,268. The consulting engineer for the company had made an estimate of cost of reproduction new less accrued depreciation including cost of financing and going concern value of $2,802,341; whereas the consulting engineer for the Public Service Commission had made a corresponding cost of reproduction estimate on the basis of which it was calculated that the valuation exclusive of cost of financing and going concern value might be $1,896,649. The company also suggested that, if proper allowance were made for the value of its water rights, its valuation based on cost of reproduction new less accrued depreciation would be increased to $3,254,569.

At this point the members of the Public Service Commission and the officers of the company achieved the regulatory and financial statesmanship of recognizing that a solution of the problem which would produce a prompt and substantial reduction of rates,

* This comment presents the individual views of the writer and is in no way intended to reflect the views either of the company and its officers or of the Public Service Commission of New Hampshire.

while holding out to the company an opportunity for increased profit as an incentive to further rate reductions, would be preferable to the resolution of these wide differences by the normal procedure of testimony, decision, appeal, and litigation. Furthermore, both sides recognized that such a solution was applicable to the facts in this case, since there appeared to be opportunities for operating economies which might be realized more readily under an incentive plan than under regulatory pressure to convert every increase in net income into a rate reduction.

The plan of settlement, presented in full below (see pp. 477–478), was thereupon worked out. It should be stated that, although the plan was formulated in the form of a proposal by the company to the commission, it cannot properly be said that either the company or the commission contributed more fully and effectively than the other to its formulation. As a matter of fact, the plan adopted was the result of a full, free, and open-minded discussion in which both parties displayed a clear recognition of the realities of the situation and a high order of intelligent cooperation.

Although the practical application of the plan necessitated a somewhat detailed description of the procedure for periodic adjustments, the essential feature of the plan is simple. The company, which had previously made a rate reduction of about $31,200 during the progress of the rate case, made an additional reduction of approximately $29,946, so as to reduce its net income, based upon its kilowatt-hour sales and expenses for the year 1939, adjusted in accordance with the plan, to $115,000 per year. For the years 1940 to 1944 inclusive it is provided that, whenever the net income adjusted in accordance with the plan exceeds $125,000, plus or minus 6% of the increase or decrease in net fixed capital after January 1, 1940, and plus 50% of the calculated amount of all rate reductions after that made upon the initiation of the plan, a further rate reduction shall be made to the amount of such excess net income. On the other hand, if the net income for any of these years should fall below $115,000 plus or minus 6% of the increase or decrease of net fixed capital after January 1, 1940, the commission will raise no objection to an increase in rates to the extent of such deficiency.

It will be noted that no fixed upper limit to the permissible net income of the company is prescribed for the five-year period of the plan, the only limitation being the possibility to the company of further expansion of sales, decrease of cost, and consequent additional rate reductions. Nor is any refunding or reservation of excess earnings over the prescribed maximum for the year required. Largely in consideration of this feature of the plan it was agreed that the permissible increase of net income should be 50% of the amount of additional rate reductions (dividing the effect of cost reductions 2/3 to consumers and 1/3 to the company)[1] instead of 100% (dividing the effect of cost reductions on a 50–50 basis).

The reduced rates put into effect as a result of this settlement made the residential service bills of the Concord Electric Company lower than those in effect in any other community in New Hampshire on January 1, 1940 for consumptions of 25 and 100 kwhs. per month and close to the lowest for 250 kwhs. per month. In its opinion approving the plan of settlement and discontinuing the rate case, the New Hampshire Public Service Commission commented as follows:

"Of even greater potential importance than the immediate reduction of rates, in the opinion of the Commission, is the provision made for incentive to increased operating efficiency and for the automatic reduction of rates to insure the public reasonable participation in savings effected thereby without any of the delay, expense, and uncertainty which now characterize rate litigation. While this arrangement, which has been described in detail earlier in this Report, is in some measure experimental, we are of the opinion that it affords real opportunities for substantial advantages to both the public and the Company, and we shall follow closely developments thereunder."

The writer shares the commission's conception of the possibilities of this plan. It is his personal hope that within the five-year period of the plan the cooperative effort of the company and the commission may result in the establishment of as low a level of electric rates as prevails anywhere in New England, and that the company may, at the same time, achieve a substantial increase in the ratio of its net income to its investment. If these results can be accomplished, a real

[1] Thus a rate reduction of $30,000 per year would permit an increase in net income of $15,000 a year. This could be accomplished by a cost reduction of $45,000 per year, 2/3 of the effect of which would be passed on to the consumers and 1/3 to the company.

"yardstick" of the possibilities of effective cooperation between public authority and private industry may be made available which will be of value to public service commissions, consumers, and the public utility industry alike.

MAURICE R. SCHARFF
Consulting Engineer,
New York City

THE STATE OF NEW HAMPSHIRE

Public Service Commission
In Re: Case D-1971
Concord Electric Company

Concord Electric Company submits the following proposal for a termination of this investigation which, if satisfactory to the Commission, the Company is willing to have incorporated in an order of dismissal.

The Proposal

(1) There shall be no finding, expressly or by inference, of a rate base or a rate of return.

(2) The Company will file and petition for authority to put into effect as of April 1, 1940, rates calculated to produce, on the basis of the kilowatt hours sold in the calendar year 1939, a reduction in gross annual revenue of approximately $29,946.00. Approximately $23,585.00 of this reduction will be made in the first block of the D or domestic rate and approximately $6,361.00 in the G or commercial rate. Proposed rates effecting these reductions are filed herewith.

(3) The Company will assume and pay the expenses of the Commission incurred in 1939 and 1940 outside its own organization on account of this investigation in the amount of $9,832.37. This expense will be amortized over 5 years, 1940 through 1944, inclusive, by annual charges of $1,966.47 to account 797—Regulatory Commission Expenses.

(4) The Company will amortize its expenses incurred in 1939 outside its own organization on account of this investigation in the amount of $42,301.00 over 6 years, 1939 through 1944, inclusive, through annual charges of $7,060.17 to account 797—Regulatory Commission Expenses. It will amortize its 1940 expense estimated at $16,000.00 over 5 years, 1940 through 1944, inclusive, by annual charges estimated at $3,200.00 to said account 797.

(5) If the adjusted net electric operating income of the Company for any calendar year from 1940 through 1944, inclusive, computed as hereinafter set forth in paragraph (6) exceeds $125,000.00 as increased or decreased respectively by 6% of the increase or decrease in net fixed capital occurring after January 1, 1940, and as increased by 50% of the calculated amount of all rate reductions made after the rate reduction set forth in paragraph (2) above, the Company will file and put into effect on April 1 of the succeeding year a rate reduction or reductions calculated, on the basis of such preceding calendar year's kilowatt hour consumption, to be equal to the difference between $125,000.00 as increased or decreased as above provided, and the adjusted net electric operating income for such calendar year.

(6) The adjusted net electric operating income for each calendar year from 1940 through 1944, inclusive, shall be determined as follows:

Subtract all revenue deductions for the calendar year in question from the gross electric operating revenues for the calendar year in question and adjust the result as follows:

(a) In order to distribute over the entire period covered by this proposal the income tax savings realized in 1939 and 1940 because of rate case expenses incurred in said years, add to gross revenue $1,234.00 (1/6 of said 1939 saving) and 1/5 of 18% (the federal income tax rate for 1940) of the expenses of the Company in 1940 and those of the Commission in 1939 and 1940 incurred outside their own organizations on account of the investigation—estimated at $950.00.

(b) Adjust the cost of purchased power according to the formula attached hereto and entitled "Water Formula"[1] to reflect what the Company would have paid for purchased power in each calendar year from 1940 through 1944, inclusive, if water conditions had been the average of the water conditions for the last 5 calendar years including the year in question.

(c) Adjust the operation and maintenance accounts as follows: If, in any calendar year, these expense accounts of the Company are increased beyond 5% of the adjusted net electric operating income in accordance with paragraph number (4), through causes beyond the control of the Company (except as may result from the effect of water conditions upon purchased power), such as hurricane, flood, ice storm, or the like, such expense shall be treated as if amortized in such a manner as not to include as an expense an amount in excess of 5% of the adjusted net electric operating income for such year or any succeeding year.

(7) If the Company, in any calendar year from 1940

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[1] WATER FORMULA:

It is desirable, if possible, to level out the effect of water conditions on the cost of purchased power, and, although it is recognized that the following formula does not exactly do this, it is proposed as a simple mathematical calculation that, under all circumstances, takes care of the question with sufficient accuracy for this purpose. The purpose of the formula is to determine what the cost of purchased power would have been in each year if the average water conditions of the year for which the computation is made and the four preceding years had pertained in the year in question.

FORMULA: Divide the number of kilowatt hours purchased in each of the preceding four years into the number of kilowatt hours purchased in the year in question; multiply the cost of purchased power for each of the preceding four years by the quotient of each of the divisions respectively to produce an adjusted cost for each of the preceding four years. Average the adjusted cost of purchased power for the four years plus the cost for the year in question, and the result is the figure to be used for the cost of purchased power for the year in question.

In the event that the power contract between Concord Electric Company and Public Service Company of New Hampshire is changed during 1940 through 1944, inclusive (and a change in contract resulting from a re-development of Sewall's Falls shall not be included as a change in contract for the purpose of this paragraph), the cost of purchased power for each year used in the calculation shall be recomputed as nearly as may be according to the changed contract and the same formula applied.

In the event that Sewall's Falls is re-developed during 1940 through 1944, inclusive, it is recognized that the formula above set forth will be inapplicable. In this event, the Company proposed to confer with the Commission for the purpose of developing a new formula to accomplish the purpose set forth in the first paragraph. If it is found impossible to work out a new formula, the actual cost of purchased power shall be used in determining the adjusted net electric operating income.

to 1944, inclusive, desires to reduce or increase the rates of depreciation of its fixed capital as now used, it will confer with the Commission with respect thereto and agree with the Commission as to what benefit the Company shall receive, if any, under the terms of this proposal, in its permissible net earnings on account of such change. If the Commission and the Company cannot agree, the Company shall have the right to withdraw its proposal to reduce the rates of depreciation.

(8) In the event that a reduction in rates becomes in order under this proposal, the Company will design and submit to the Commission for its consideration, seasonably in advance of April 1, a rate or rates designed to effect such reduction and at the request of the Commission will confer with the Commission with respect thereto for the purpose of making said rates as nearly satisfactory to both the Commission and the Company as is reasonably possible.

(9) If, for any cause, including municipal or state generation and use of electric current, the adjusted net electric operating income in any calendar year from 1940 through 1944, inclusive, shall fall below $115,000.00 increased or decreased respectively by 6% of the increase or decrease in net fixed capital occurring after January 1, 1940, the Commission will raise no objection to an increase in rates to take effect on April 1 of the succeeding year, designed to produce a net income for the succeeding calendar year of $115,000.00 as increased or decreased as provided above on account of changes in net fixed capital.

(10) The Company will petition the Supreme Court for a dismissal of the appeal which it took in the course of this investigation.

(11) In making this proposal the Company recognizes that, if the Commission acts in accordance therewith, such action will be wholly without prejudice to consideration by the Commission of complaints against the rates, services and practices of the Company which may hereafter be made by any interested party.

Respectfully submitted,
CONCORD ELECTRIC COMPANY
By _____
Its attorneys

Federal Regulation of Water Carriers

SINCE 1887 when Congress enacted the Interstate Commerce Act for the purpose of regulating railroads, there have been suggestions that other kinds of transportation, especially that by water, should also be regulated;[1] but these suggestions had little effect so long as the railroad industry enjoyed a virtual monopoly and most of its plant capacity was being utilized. A business slump and the growth of competing forms of transportation, particularly since 1925, resulted not only in an excess of facilities for all carriers but also in severe operating losses coupled with numerous receiverships and reorganizations for many railroads. Regulation of competing forms of transportation, such as motor and water carriers, was one of the remedies devised by Congress. In 1935 a comprehensive motor carrier act vested jurisdiction over those carriers in the Interstate Commerce Commission.[2] Recently the Interstate Commerce Act was further amended to grant that commission extensive powers over water carriers operating in interstate commerce between ports in the United States.[3]

National Transportation Policy

Since 1933 various committees,[4] some of which were accused of being partisan, made recommendations for a solution of the transportation problem; from these studies there evolved a new declaration of policy in the Interstate Commerce Act, as recently amended, which may be briefly described as equality of regulation for all forms of transportation:

"... It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this Act, so administered as to recognize and preserve the inherent advantages of each; to promote safe, adequate, economical, and efficient service and foster sound economic conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust dis-

[1] Commissioner Eastman stated that in the second annual report of the ICC there was a recommendation that water carriers should be placed under the same regulation as rail carriers. See Hearings before Senate Committee on Interstate Commerce on S. 2009, 76th Cong., 1st sess. (1939) 756, hereafter referred to as Senate Hearings.

[2] See Part II of the Interstate Commerce Act; Part I relates to railroads.

[3] P.A. 785, the Transportation Act of 1940 was signed by the President on September 18, 1940; most of the provisions relating to water carriers were placed under Part III of the Interstate Commerce Act. Prior to this enactment the U. S. Maritime Commission, the ICC, and other bodies had limited powers of regulation over certain water carriers (Senate Hearings, 284).

[4] Examples of these are the National Transportation Committee formed in 1932 and headed by former President Coolidge, the Joint Committee of Railroads and Highway Users organized in 1932, the National Transportation Conference of 1938, and the Committee of Six appointed by the President in September, 1938. For comments on the reports of these committees, see Senate Hearings, 463.

criminations, undue preferences or advantages, or unfair or destructive competitive practices; to cooperate with the several States and the duly authorized officials thereof; and to encourage fair wages and equitable working conditions;—all to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the Postal Service, and of the national defense. All of the provisions of this Act shall be administered and enforced with a view to carrying out the above declaration of policy."

Section 303 also provides that the regulatory provisions and policies shall be applied in the same way to water carriers owned or controlled by the United States as to carriers not so owned or controlled.[5]

Carriers Subject to Regulation

Although the ICC and the Maritime Commission formerly had jurisdiction over certain operations of water carriers, the recent enactment gives to the ICC these and additional powers over both contract and common carriers, particularly where they compete with other kinds of transportation. Certain water carrier operations are exempt from the provisions of the act; some of the important exemptions in Section 303 are: (1) transportation of commodities in bulk, in accordance with the custom of the trade, if the cargo space of the vessel in which such commodities are carried is being used for the transportation of not more than three such commodities; (2) hauls by a contract carrier of commodities in bulk in a non-ocean vessel on a voyage during which (a) the cargo space is used for carrying not more than three such commodities and (b) the vessel passes within or through waters which are international by virtue of a treaty to which the United States is a party; (3) transportation of liquid cargoes in tankers, designed for such use exclusively;[6] (4) transportation by contract carriers which by reason of the inherent nature of the commodities transported, their requirement of special equipment, or their shipment in bulk is not actually or substantially in competition with transportation by common carriers by water, rail, or motor;[7] (5) unless and to the extent that the commission finds that the national transportation policy requires regulation the statute will not apply to (a) transportation solely within the limits of a single harbor or contiguous harbors when such transportation is not part of a continuous through movement to or from a place beyond these harbors and under common control or (b) small craft not in excess of a named capacity or (c) ferries;[8] (6) the commission shall also exempt a carrier which it finds is engaged solely in transporting the property of a person who owns all or substantially all of the voting stock of the carrier; (7) Section 305 provides that when the rates, practices, etc., of other persons engaged in water transportation to and from *foreign* ports in competition with water carriers subject to the Interstate Commerce Act cause undue disadvantage to carriers subject to the act, the regulated carriers may be relieved in whole or in part from such regulation by the commission.

Rates and Rate-Making

Because of the severe competition between water and rail carriers, each group advocated a rule of rate-making that would benefit it in the battle for business. The Wadsworth amendment which was the subject of much discussion on the floor of both houses and was adopted by each house with a minor difference (prior to the final conference) provided that[9]

"In order that the public at large may enjoy the benefit and economy afforded by each type of transportation, the Commission shall permit each type of carrier or carriers to reduce rates so long as such rates maintain a compensatory return to the carrier or carriers for the service rendered: Provided, That nothing in this paragraph shall be construed so as to affect the long-and-short-haul provision of section 4."

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[5] Apparently this represents a change in Congressional attitude toward the Inland Waterways, which were created and have been subsidized by the Federal Government since 1920 as a means of checking the rail monopoly. (See 86 *Congressional Record* 15576 (August 12, 1940).)

[6] These tank vessels which usually contain petroleum products are either private or contract carriers; in most, if not all, instances they do not compete with other forms of transportation (Senate Hearings, 555,637).

[7] These are carriers on the Great Lakes who transport grain, ore, stone, and coal in large quantities at very low rates which the railroads cannot meet; a carrier in this group must apply to the commission for the exemption (Senate Hearings, 56, 494, 499, 555, 689). It was also contended that these carriers must compete with Canadian boats (*Ibid.*, 486).

[8] The arguments in favor of the group (5) exemptions may be found in Senate Hearings, 713.

[9] 86 *Congressional Record* 15575 (August 12, 1940).

Its sponsor stated that[10]

"The amendment merely provides that the Interstate Commerce Commission shall permit a carrier to reduce rates so long as those rates are compensatory. Its purpose is to prevent arbitrary rate increases being imposed upon low-cost carriers in order to benefit their high-cost competitors. While it clearly indicates that the Congress does not approve of widespread below-cost rates being used to destroy competition, it contains nothing which would or could be construed as requiring that all rates bear the same proportionate share of over-all expenses. There has never come to my attention any meritorious criticism of the amendment or of the purpose it seeks to accomplish—the protection of the shipping public in their enjoyment of low-cost transportation."

The sole purpose of this amendment, which was favored by water carriers, appears to have been to protect the water carriers from the destructive rate-cutting policies of the railroads. The opponents of this amendment claimed, among other things, that if all rates must be compensatory it would be necessary to increase many railroad rates which were slightly above the out-of-pocket expenses and would not move traffic at a higher freight rate because of competitive conditions.[11]

The ICC advised the Congressional Committees that the proposed amendment was "both unnecessary and undesirable" in view of other provisions of the rate-making rule and policy declaration:[12]

"In our judgment, the provision in question is not necessary in order that the public at large may enjoy the benefit and economy afforded by each type of transportation. The requirement in the rate-making rule that the Commission give due consideration to the effect of rates on the movement of traffic by the carrier or carriers for which the rates are prescribed and also to the need in the public interest of adequate and efficient transportation by such carrier or carriers at the lowest cost consistent with the furnishing of such service, coupled with the admonition in the declaration of policy in section 1 that the provisions of the act be so administered as to recognize and preserve the inherent advantages of each mode of transportation, will afford adequate protection in this respect. If experience should show that further protection is needed, contrary to our expectation, Congress can amend the act, but such a restriction as is now proposed is, we believe, both unnecessary and undesirable."

The Wadsworth amendment was rejected by the conferees; their report was finally approved by both houses.

The rate-making rule hitherto followed by the ICC was criticized by certain water carriers on the ground that "added traffic rates" which were charged by railroads resulted in destructive competitive practices and that Congress should declare itself as opposed to such practices.[13] The rate-making rule as finally enacted makes no important changes in the existing standard, grants the commission broad discretionary powers in exercising their judgment, and contains nothing to indicate it might prescribe an unreasonable rate for a water carrier to divert traffic to a competing or rail carrier; furthermore, section 305 which relates to discrimination and preferences contains a proviso that

". . . this subsection shall not be construed to apply to discriminations, prejudice, or disadvantage to the traffic of any other carrier of whatever description. Differences in the classifications, rates, fares, charges, rules, regulations, and practices of a water carrier in respect of water transportation from those in effect by a rail carrier with respect to rail transportation shall not be deemed to constitute unjust discrimination, prejudice, or disadvantage, or an unfair or destructive competitive practice, within the meaning of any provision of this Act."

As is the case with rail and motor carriers, common carriers by water are subject to provisions relating to publication, filing and posting of tariffs, reasonable and non-discriminatory rates, etc., and the new provision that the burden of proof in any hearing involving a *change* in rates, etc., shall be upon the carrier. There are also various provisions, most of which are not new, for through routes with other common carriers by water, rail, or motor, divisions of such through rates and differentials between all-rail rates and rail-water rates. A new provision applicable to all carriers, both common and contract, provides that if a shipper renders any service or furnishes any instrumentality in connection with the transportation to the carrier, the charge and allowances must be published in the tariffs on file with the commission.

Contract Carriers

This class of carriers is prevalent in both the motor and water carrier fields; it has

[10] 86 *Congressional Record* 15574 (August 12, 1940).

[11] 86 *Congressional Record* 15573, 15585 (August 12, 1940). See also Conference Report, 86 *Congressional Record* 15316 (August 7, 1940).

[12] Letter of Jan. 29, 1940 reprinted in 86 *Congressional Record* 15586 (August 12, 1940).

[13] For an explanation of this theory and the *Sugar Cases of 1933*, 195 ICC 127, sustained in *Mississippi etc. Co. v. U. S.*, 292 U. S. 282 (1934), see Senate Hearings 697, 704.

caused much litigation because it competes with common carriers and because certain legal obstacles prevent complete regulation over it. Generally speaking, a contract carrier is one who transports under agreements or individual contracts; the act also includes as contract carriage the leasing for compensation of a vessel to a person not subject to the act to be used by such person for the transportation of his own property unless such leasing is exempt from regulation by the commission. Contract carriers are required to establish and observe reasonable *minimum* rates; in addition they must file and keep open for public inspection their schedules of minimum rates actually maintained; changes in rates can be made only on 30 days' notice. The commission has the power under Section 306 of the act to relieve these carriers in whole or in part from these provisions relating to tariffs and rates.

Whenever the commission finds that a minimum rate contravenes the national transportation policy declared in the act or is in contravention of any provision of Part III of the act, the commission may prescribe just and reasonable minimum rates. Such rates

> "shall give no advantage or preference to any such carrier in competition with any common carrier by water subject to this part, which the Commission may find to be undue or inconsistent with the public interest and the national transportation policy declared in this Act, and the Commission shall give due consideration to the cost of the services rendered by such carriers, and to the effect of such minimum rate or charge, or such rule, regulation, or practice, upon the movement of traffic by such carriers."

Whenever a contract carrier files a schedule for a new service or a reduced rate, the schedule may be suspended by the commission and a hearing held concerning its lawfulness; the burden of proof in such cases is on the carrier.

The commission may require any carrier to file a copy of any contract or agreement, but these are not to be made public except when part of a record in a formal proceeding, or when such contract fails to conform with the minimum rate schedules on file with the commission.

Many water carriers have operated in a dual capacity, i.e., both as a common and contract carrier; in some cases this adds to the difficulty of regulation and may often lead to unjust discrimination between shippers. Section 310 provides that no dual operations shall be allowed by a person or his affiliates unless the commission finds that such dual operations are consistent with the public interest and the national transportation policy. This section will no doubt apply to existing operations, where persons would continue under the grandfather clause, as well as to new operations.[14]

Other Provisions

For some years the railroads have asked Congress to repeal Section 4 of the Interstate Commerce Act, the long-and-short-haul clause; this request was again denied. The section was modified slightly by the elimination of the "equidistant" provision and was made applicable not only to railroads but also to common carriers by water. The statute also contains provisions for certificates to common carriers and permits to contract carriers, reports, uniform system of accounts, depreciation rates, investigation of transactions with affiliates, and the acquisition by railroads of water carriers that do not operate through the Panama Canal.[15] Congress refused to extend the commodities clause to water carriers.

This comprehensive legislation is designed not only to aid the railroads in their efforts to recover lost traffic, but also to formulate a national policy of equal regulation for the competing kinds of transportation.

Member, Chicago Bar A. L. STEIN

[14] Senate Hearings, 635.

[15] There is some question as to the meaning of the amendments to the Panama Canal act; it was stated that there was no intention to modify the act but merely to clarify its provisions. (86 *Congressional Record* 17849 (Sept. 9, 1940).)

Coordination of the Nebraska Public Power Districts

COORDINATION of Nebraska's three major public power and irrigation districts[1] was completed in August, 1940 with the districts refinanced, operating under a

[1] For a general discussion of the original projects, see William F. Kennedy, "The Nebraska Public Power Districts," 15 *Journal of Land & Public Utility Economics* 29–48 (February, 1939).

pooled revenue agreement, and marshaling their efforts to conserve water resources and market irrigation water and power without waste. The three districts are The Central Nebraska (Tri-County) Public Power and Irrigation, Platte Valley (Sutherland) Public Power and Irrigation, and Loup River Public Power.

The coordination does not mean that the districts have merged, except that power distribution under the grid system is merged for joint operation. Otherwise the districts operate separately, as they have since their inception. Each will continue individual operation under its board of directors, operating its own power plants, canals, and irrigation systems. The coordination is on joint operation of transmission and sale of power only.

Under this coordination the three district managers act as a board of managers with the advantage that they will be able to conserve each district's water resources, produce electric power without water waste, and market that electrical energy to the best advantage. This board of managers is comprised of George E. Johnson, Chief Engineer and General Manager of Tri-County; Harold Kramer, Secretary and General Manager of Loup River; and Gerald Gentleman, Secretary and General Manager of Platte Valley. These three managers have completed administrative details and adopted regulations and Mr. Johnson has said that no general manager will be employed until the Tri-County gets its three hydro plants on the line and the project is functioning. Business headquarters will be established at Columbus.

Power loading dispatching which covers the 700 miles of 115 kv. grid system will be handled out of Hastings as Hastings is about the center of the transmission system. The 115 kv. system runs from North Platte in western Nebraska to Omaha and Lincoln in eastern Nebraska. This system is built to serve the chief population area of Nebraska. The dispatcher at Hastings will regulate power production from each of the plants in the grid system so as better to conserve water.

The refinancing totals $19,793,000 for the Tri-County, $9,268,000 for the Loup District, and $8,776,000 for the Platte Valley Project. Each of the districts is given an extension of time on payments since under original financing no provision was made for money during early operation.

This resulted in a "starvation" period because the Government could not loan money and no funds could be borrowed from banks for initial operation expenses. Now it is possible for the districts to get into operation, build up their power sales load, and expand the irrigation from which they will get their revenue.

These revenues will be pooled, with Tri-County getting about 50% and Platte Valley and Loup River about 25% each. Directors of the three districts have executed an agreement naming the First National Bank of Lincoln central depository for the pooled revenues. This bank disburses revenues immediately upon receipt to trustees of each district on the above percentage basis.

The refinancing program, Mr. Johnson said, not only cuts down administrative costs but also makes bond payments fit revenues.

The grid system has a capacity of 127,700 kws., provides irrigation for over 200,000 acres and storage of water to irrigate additional land.

Construction is being completed on the giant Kingsley Dam which will create a reservoir with a capacity of storing 2,000,000 acre feet of water. This is an on-river dam, the second largest earth-core dam in the world. It will store water from the Platte River which in years past has gone to waste in the fall, winter, and spring.

Mr. K. Sewell Wingfield, former Chief Project Engineer of the PWA for Nebraska, said the coordinated system will be capable of an output of approximately 480,000,000 kwhs. of firm power a year. He based this estimate on water available during the drouth years of 1930–38. (This is also the figure on which new refinancing under the coordination is calculated.) The breakdown for the three districts on an annual basis is as follows: Loup River, 169,562,000 kwhs.; Platte Valley, 117,524,000 kwhs.; and Tri-County, 204,314,000 kwhs. This totals 491,400,000, whereas the PWA under the coordination placed the figure at 480,000,000 kwhs. annually.

The three districts already are serving a large number of towns and rural electrification districts and have power exchange agreements with such large Nebraska private firms as the Iowa-Nebraska Light and Power Company of Lincoln and Nebraska Power Company of Omaha. The districts thus ex-

pect to have a ready demand for all electricity the coordinated system can supply.

The total estimated revenues for the three districts under the coordination are approximately $3,250,000 annually.

The Tri-County project on October 19, 1940 took over operation of the Southern Nebraska Power Company under a lease-purchase agreement with the Consumers Public Power District of Columbus. Consumers bought the properties, serving 32 towns at wholesale and retail in South Central Nebraska and 2 in Kansas, for $902,-290.84 through a $1,100,000 bond issue arranged by Guy C. Myers, New York, fiscal agent, at Chicago. Tri-County did not put up any cash in the deal but simply took the properties on a 25-year lease-purchase plan, paying through earnings of the system and passing all savings in power costs and operation to consumers in the form of rate reductions. Mr. Johnson said the Southern Nebraska Division expects to announce rate reductions in 60 days approximating a 20% reduction in revenues. This reduction would adjust present inequalities in costs of power to towns served at wholesale. Tri-County has been supplying the Southern Nebraska company with about ½ of its electrical requirements.

Of chief interest to Nebraskans, however, is the fact that much water under the coordination will be conserved for irrigation and will provide a better utilization for a market for electricity.

"Tri-County for instance," Mr. Johnson said, "could call upon the Loup district to carry heavier power production load when Tri-County is anxious to hold back water for irrigation and storage."

An example of this occurred in August, 1940 when the Platte Valley project halted generation of power as the last of its storage in its Sutherland reservoir passed through its power house on its way to irrigators. The Loup plant at once took over the load and supplied Platte Valley customers with electricity until the Sutherland storage season resumed this fall.

The same methods can apply to Tri-County's three hydro plants during times when demands for irrigation water for farmers will be heavy. Its plants can trim down and Loup generators can swing in and "carry the ball" for Tri-County until storage behind Kingsley Dam is restored or irrigation demands have decreased.

The project, thus, although still retaining individual operation, can conserve Nebraska's waters and utilize them to the best benefit of its irrigators and electrical power consumers.

JACK KINTZI
Public Relations Director,
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Public Utility Financing in the Second and Third Quarters of 1940

PUBLIC utility security offerings, excluding common stock, totaled $178 millions during the second quarter of 1940 and $244 millions during the third quarter. Neither quarter equaled the $263 millions issued in the first quarter of 1940. The total to date in 1940 ($685 millions) is less than the total offerings for the first three quarters of 1939 ($973 millions).

Long-term bonds, excluding serial issues, amounted to $132 millions in the second quarter and $221 millions in the third quarter of 1940 (74% and 91% respectively, of the total offerings). Serial offerings were small, totaling $3 millions and $6 millions, in the second and third quarters, respectively.

The proportion of long-term bonds sold privately in the first three quarters of 1940 is about the same as for the 12 months of 1939. The percentage of long-term bonds sold privately varies from quarter to quarter. The total to date for 1940 is not necessarily indicative, but there does seem to be a let-up in the trend toward private financing. Subsequent data must be available, however, before this can be definitely established.

Preferred stock issues fell off considerably in amount in the third quarter after having been above average in the first and second quarters of 1940.

Long-Term Financing. Tables I-A, I-B, II-A, and II-B show the detail of the long-term bonds offered publicly and privately in the second and third quarters of 1940. The weighted average yields are very low. The third quarter average offering yield of 3.10% for publicly sold issues is the lowest since this series was started in 1935. Several utilities

TABLE I. SUMMARY AND ANALYSIS OF LONG-TERM DEBT ISSUES OFFERED PUBLICLY: PART A. SECOND QUARTER, 1940[a]

Company and Issue (A)	Coupon Rate (B)	Principal Amount (C)	Maturity Date (D)	Month of Offering (E)	Offering Price (F)	Offering Yield (G)	Underwriters' Commissions (H)	Estimated Incidental Expenses (I)	Net Proceeds to Company (J)	Cost to Company (K)	Times Interest Earned[b] (L)
	%				%	%	%	%	%	%	
Toledo Edison Co.											
First Mortgage	3¼	$3,000,000	1970	April	104.50	3.02	2.00	.83[c]	101.67	3.41	3.7
Sinking Fund Debentures	3½	7,250,000	1960	April	102.00	3.36	2.00	.83[c]	99.17	3.56	3.2
West Penn Power Co.											
First Mortgage	3	3,500,000	1970	April	104.50	2.78	2.00	.95	101.55	2.92	3.8[d]
Jersey Central Power & Light Co.											
First Mortgage	3½	38,000,000	1965	June	102.50	3.35	2.00	.66	99.84	3.51	3.3
Totals or Weighted Average	—	$51,750,000	—	—	102.68	3.29	2.00	.71	99.97	3.47	3.3

PART B. THIRD QUARTER, 1940[e]

Arkansas-Missouri Power Corp.											
First Mortgage	4	$ 2,350,000	1965	July	102.00	3.87	2.00	.71	99.29	4.05	5.2
Cleveland Elec. Illuminating Co.											
First Mortgage	3	50,000,000	1970	July	105.50	2.73	2.00	.41	103.09	2.85	6.0
Indianapolis Power & Light Co.											
First Mortgage	3¼	32,000,000	1970	July	104.50	3.02	2.00	.90	101.60	3.17	3.8[d]
Iowa Southern Utilities Co.											
First Mortgage	4	10,000,000	1970	July	101.00	3.94	2.00	.82[c]	98.18	4.11	3.6
General Mtge. Sinking Fund	4½	2,660,000	1950	July	101.00	4.38	2.50	.82[c]	97.68	4.80	2.8
Northwestern Public Service Co.											
First Mortgage	4	6,000,000	1970	August	102.50	3.86	2.00	.50	100.00	4.00	3.2
Houston Natural Gas Corp.											
First Mortgage	4	3,500,000	1955	Sept.	100.00	4.00	3.50	1.31	95.19	4.44	3.8[d]
Southern California Gas Co.											
First Mortgage	3¼	30,000,000	1970	Sept.	103.50	3.07	2.00	.37	101.13	3.19	4.1[d]
Totals or Weighted Average	—	$136,510,000	—	—	104.08	3.10	2.05	.59	101.44	3.24	4.6

[a] Excludes $150,000 Northern Wisconsin Power Company first mortgage bonds of 1965 (complete information not available).
[b] Based on latest available information after giving effect to the new financing.
[c] Pro rata share of expenses.
[d] Based on a consolidated income statement, after giving effect to change in capitalization.
[e] Excludes the following issues for which complete data are not available:

$ 90,000	Consolidated Mutual Water Co. 1st 4½'s of 1955
85,000	Central Wisconsin Gas Co. 1st 5's of 1960
100,000	Lincoln Water Co. 1st 4's of 1960
35,000	Washburn Water Co. 1st 4's of 1960
125,000	Western Reserve Telephone Co. 1st 3¾'s of 1960
$435,000	

obtained bond money at a net cost of less than 3.00% during the second and third quarters. These were: (1) Cleveland Electric Illuminating Company, net cost 2.85%; (2) Potomac Electric Power Company, net cost 2.87%; (3) West Penn Power Company, net cost 2.92%; (4) Public Service Electric and Gas Corporation, net cost 2.93%. The foregoing data indicate that high quality bonds may be issued by major utility companies at a price to make a net cost to the utility of about 3.00%.

No significant change occurred in the amount of underwriters' commissions or incidental expenses in the period examined. These items, as pointed out in previous articles, appear to be stabilized at about 2.00% for underwriters' commissions and between .50% and .75% for incidental expenses for publicly offered long-term debt issues. Incidental expenses vary with the size of the issue and this factor probably explains most of the variation which has occurred in this item in the past three or four years. An attempt has been made to show finders' fees and other expenses for privately sold long-term bond issues. This information is difficult to obtain and consequently the tables are somewhat incomplete. Enough data have been obtained for the first three quarters of 1940 to indicate that these expenses probably do not exceed the incidental expenses of publicly offered bond issues.

Other Utility Financing. The seven issues having serial maturities, which were offered in the second and third quarters of 1940, are

TABLE II. SUMMARY AND ANALYSIS OF LONG-TERM DEBT ISSUES OFFERED PRIVATELY:

PART A. SECOND QUARTER, 1940[a]

Company and Issue (A)	Coupon Rate (B)	Principal Amount (C)	Maturity Date (D)	Month of Offering (E)	Offering Price (F)	Offering Yield (G)	Incidental Expenses: Finders' Fees (H)	Incidental Expenses: Other Expenses (I)	Net Proceeds to Company (J)	Net Cost to Company (K)	Times Interest Earned[d] (L)
	%				%	%	%	%	%	%	
Kansas Gas & Electric First Mortgage	3⅜	$16,000,000	1970	April	105.00	3.12	.38	.72	103.90	3.17	4.0
West Virginia Water Service Co. First Mortgage	4	200,000	1961	April	105.50	3.62	—[b]	—[b]	—[b]	—[b]	2.0
Western Light & Telephone Co. First Lien	3¾	1,500,000	1969	May	102.50	3.61	—[b]	—[b]	—[b]	—[b]	5.2[e]
West Coast Power Co. First Mortgage, Series A	4¼	1,000,000	1965	June	100.00	4.25	.62	1.63	97.75	4.40	5.1
Carolina Power & Light Co. First Mortgage	3¾	46,000,000	1965	June	103.50	3.54	.16	.31	103.03	3.57	2.2
Central Hudson Gas & Elec. Corp. Mortgage Bonds, 30-year	3	2,200,000	1970	June	101.00	2.95	—[b]	—[b]	—[b]	—[b]	3.9
Pennsylvania State Water Corp. 1st Coll. Trust	4	7,600,000	1965	June	106.17	3.63	—[b]	—[b]	—[b]	—[b]	2.0[e]
Total or Weighted Average	—	$76,500,000	—	—	103.96	3.46	—[b]	—[b]	—[b]	—[b]	2.7
Adjusted Total or Average[c]	—	$63,000,000	—	—	103.83	3.45	.22	.44	103.17	3.48	2.7

PART B. THIRD QUARTER, 1940[f]

Central Kansas Power Co. First Mortgage	4½	$ 900,000	1965	July	100.00	4.50	—[b]	—[b]	—[b]	—[b]	4.6
Southwestern Associated Tel. Co. First Mortgage	3¾	3,250,000	1970	July	102.00	3.64	—[b]	—[b]	—[b]	—[b]	3.5[e]
Illinois Commercial Tel. Co. First Mortgage	3¾	5,750,000	1970	July	101.00	3.69	—[b]	—[b]	—[b]	—[b]	2.7
Jersey Shore Water Co. First Mortgage	4½	325,000	1965	July	101.00	4.43	—[b]	—[b]	—[b]	—[b]	—[b]
Rochester Gas & Electric Co. General Mortgage	3⅜	15,000,000	1970	July	105.00	3.14	None	1.02	103.98	3.17	2.7
Indiana Telephone Co. First Mortgage	3½	700,000	1960	August	100.00	3.50	—[b]	—[b]	—[b]	—[b]	3.0
Pub. Serv. Elec. & Gas Corp. 1st and Ref. Mtge.	3	15,000,000	1970	August	101.50	2.92	None	.17	101.33	2.93	5.1
Copper District Pr. Co. First Mortgage	4½	250,000	1956	August	99.00	4.59	—[b]	—[b]	—[b]	—[b]	3.5
Iowa Electric Light & Pr. Co. First Mortgage	3½	12,600,000	1965	August	100.00	3.50	—[b]	—[b]	—[b]	—[b]	3.8
Potomac Electric Power Co. First Mortgage	3¼	10,000,000	1975	Sept.	108.77	2.83	.25	.17	108.35	2.87	6.7
Total or Weighted Average	—	$63,775,000	—	—	103.10	3.22	—[b]	—[b]	—[b]	—[b]	4.2
Adjusted Total or Average[c]	—	40,000,000	—	—	104.63	2.98	.06	.49	104.08	3.01	4.6

[a] Excluding the following privately sold issues for which no price information was available:

$ 250,000	Bernards Water Co. 1st Mtge. 3¾'s of 1965
1,550,000	New Jersey Water Co. 1st Mtge. 4's of 1965
1,800,000	New Haven Water Co. 1st Mtge. 3¼'s of 1965
$3,600,000	

[b] Data not available.

[c] Including only those utilities for which data on incidental expenses are available.

[d] Based upon the latest available information after giving effect to the new financing.

[e] Based on a consolidated income statement, after giving effect to change in capitalization.

[f] Excluding the following privately sold issues for which no price information was available:

$ 125,000	St. Augustine Gas Co. 1st Mtge. 4½'s of 1965
2,225,000	Huntington Water Corp. 1st Mtge. 3¾'s of 1965
1,000,000	City of New Castle Water Co. 1st Mtge. 3¾'s of 1975
15,000,000	Western Massachusetts Co. Secured Notes 2.70% of 1955
1,500,000	Rumford Falls Power Co. 1st Mtge. 3⅛'s of 1950
$19,850,000	

as follows:

Second Quarter

$1,850,000 Wisconsin Power & Light Co., 2¼% Unsecured Serial Notes, due 1941–46, placed privately.
910,000 Philadelphia Transportation Co., 1–2½% Equipment Trust Certificates, due 1942–45, placed privately.
250,000 Clifton Forge-Waynsboro Telephone Co., First 3–3½'s, due 1940–60, price 100–103.56 to yield 1.0–3.5%.
45,000 Wolverton Brothers Light and Power Co., First Mortgage 6% Serial Bonds, due 1941–50 at par.

$3,055,000

Third Quarter

$2,750,000 Florida Public Service Co., 4½% Serial Debentures, due 1943–55, sold privately at 100.
1,320,000 Gulf Public Service Co., First 3¾'s, due 1941–65, sold privately at 99½.
1,980,000 Iowa Electric Light and Power Co., General 3¼'s, due 1942–47, sold privately at 100.

$6,050,000

Offerings of preferred stock in the second and third quarters are listed in Tables III-A and III-B. A relatively large volume of preferred stock was offered in the first and second quarters of 1940, whereas the third quarter total was much smaller. The total to date in 1940 is $113 millions as compared with $131 millions in the same period of 1939. The Consolidated Gas Electric Light and Power Company of Baltimore sold an issue of 4% preferred at a price to yield only 3.85%, which is the lowest offering yield on any utility preferred stock issued since this series was started in 1935.

There continues to be a scarcity of new public utility common stock offered for pub-

TABLE III. SUMMARY AND ANALYSIS OF PREFERRED STOCK ISSUES OFFERED:
PART A. SECOND QUARTER, 1940

Company and Issue (A)	Dividend (B)	Principal Amount (C)	Month of Offering (D)	Offering Price (E)	Offering Yield (F)	Underwriters' Commissions per Unit (G)	Estimated Incidental Expenses per Unit (H)	Net Proceeds to Company per Unit (I)	Net Cost to Company (J)	Times Preferred Dividends and Prior Requirements Earned[a] (K)
					%				%	
Kansas Power & Light Co. Cum. Pfd., $100 Par	4⅛%	$13,916,900	April	$103.00	4.37	$3.00[b]	$ .70	$99.30	4.53	1.96
Wisconsin Electric Power Co. Cum. Pfd., $100 Par	4¾%	3,617,000[d]	April	100.00	4.75	3.00	.44[e]	96.56	4.92	1.56[f]
Washington Gas Light Co. Cum. Conv. 24,400 Shares of No Par	$4.50	2,513,200	April	103.00	4.37	3.00[e]	1.46	98.54	4.57	1.89
Total or Weighted Average	—	$20,047,100	—	—	4.44	—	—	—	4.61	1.96

PART B. THIRD QUARTER, 1940

Commonwealth Water Co. Cum. Pfd., $100 Par	5½%	$ 700,000	July	$102.50	5.37	$4.00	$1.93	$ 96.57	5.70	1.59
Northern Ohio Telephone Co. Cum. Pfd., $100 Par	5%	353,400	July	105.00	4.76	—[g]	—[g]	—[g]	—[g]	1.94
Baltimore Con. Gas Elec. Lt. & Pr. Co. Cum. Pfd., $100 Par	4%	6,892,800	August	104.00	3.85	2.00	.87	101.13	3.96	2.52
Narragansett Elec. Co. Cum. Pfd., $50 Par	4½%	9,000,000	August	53.25	4.23	1.50	.47	51.28	4.39	2.39[f]
Total or Weighted Average	—	$16,946,200	—	—	4.13	—	—	—	4.27[h]	2.40

[a] Based upon latest available figures after giving effect to the new financing.
[b] Assuming that none of the stock was purchased through the exercise of exchange privileges granted holders of the old preferred issue. A commission of $1.00 per share was paid on stock exchanged.
[c] Assuming that none of the stock was purchased through the exercise of subscription rights granted holders of common stock. A commission of $1.50 per share was paid on stock sold by means of warrants.
[d] This represents the amount sold through underwriters. In addition, the company exchanged 225,928 shares of the same issue for a like number of shares of 6% preferred, issue of 1921, giving in addition to the preferred stock a share of common ($10 par value) for each share exchanged.
[e] Prorated between portion sold by underwriters and portion exchanged.
[f] Based on a consolidated income statement, after giving effect to change in capitalization.
[g] Information not available. Issue sold privately.
[h] Excluding issue of Northern Ohio Telephone Company.

lic sale. During the second quarter an issue of Indianapolis Power and Light no-par common was offered for public sale at $24.00 per share. Included in this offering were 714,835 shares, of which only 68,855 are newly issued shares, the balance representing a liquidation by the trustee of estate of Utilities Power and Light Corporation. Funds received from the sale of the 68,855 new shares were used for capital expenditures. This issue represents one of the few major offerings of equity securities by public utility companies in recent years. Underwriters' commissions were $2.00 per share and the offering price was 15 times 1939 earnings on a per-share basis.

The Wisconsin Electric Power Company in connection with its refunding of preferred stock offered one share of common stock ($10 par) with one share of new preferred (see footnote to Table III-A). Under this arrangement 167,218 shares were placed in the hands of the public. The North American Company (the holding company which controls the Wisconsin Electric Power Company) obtained 58,710 shares under the exchange agreement and an additional 120,000 shares in exchange for 20,000 shares of Wisconsin Electric Power Preferred Stock.

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Bonneville Resale Rates Pay Out

FOUR publicly owned electric systems were distributing Bonneville power during the first eight months of 1940, and during this period all these systems were operating under much lower rates than were in effect previously. An examination of the operating results achieved by these electric systems during the first eight months of 1940 provides preliminary information as to the effects of the rate reductions, and the extent to which the new rates provide for all costs of operation. The distributors instituting these rates broke away from the traditional requirement that customers must "earn their reductions" before receiving them, and the new rates were based on estimates of the sales, revenues, and expenses under lower rates. This approach is essential if the "vicious circle" that has hampered the development of full utilization of electricity in the past is to be broken. Utilities have generally insisted that consumption must first be increased before rates can be cut, and customers have been equally insistent on lower rates being available before materially increasing their consumption. In any competitive business this "vicious circle" would have been broken long ago, but utilities have apparently relied on their monopoly position, and with some important exceptions have refused to reduce rates in anticipation of larger use under lowered rates. The facts as to the manner in which customers respond to lowered rates have become so generally known in recent years that the effects of the rate reduction on customers' usage can be readily considered when determining the amount of reduction that can be made.

The rates put into effect by the four distributors of Bonneville power being analyzed are shown in Table I, and a comparison of typical bills under these rates and under the rates previously in effect are shown in Table II. Cascade Locks, Oregon, was the first system to distribute Bonneville power. This municipal plant acquired its properties and began serving the entire community in August, 1939, and in the following November made substantial rate reductions. The average residential cut was 32% and the average commercial and power reduction was 13%. Forest Grove, Oregon, was the next distributor, beginning the purchase of Bonneville power on November 27, 1939. December bills were at new low rates, which have since been adopted as the Bonneville Standard Resale Rates. The average residential reduction in Forest Grove was 36%, and the average commercial and power reduction was 46%.

The Canby, Oregon, municipal plant commenced distribution of Bonneville power on February 1, 1940, with a rate cut effective this same month. The rates adopted by Canby were the same as those used in Forest Grove, except for a higher residential minimum bill. The average residential reduction was 30%, and the average commercial and power reduction was 42%. Skamania County Public Utility District purchased Bonneville

TABLE I. COMPARISON OF RATE SCHEDULES OF FOUR PUBLIC AGENCIES DISTRIBUTING BONNEVILLE POWER

Class of Service	Forest Grove	Canby	Skamania Co. P.U.D.	Cascade Locks
Residential				
First 50 kwhs. per month @	3¢	3¢	4⅓¢	4⅓¢
Next 50 " " " @	2¢	2¢	2¢	2¢
Next 200 " " " @	1¢	1¢	1¢	1¢
Next 900 " " " @	½¢	½¢	½¢	½¢
Over 1,200 " " " @	¾¢	¾¢	¾¢	¾¢
Minimum Bill	$0.75	$1.00	$1.00	$1.00
Commercial				
Energy Charge:				
First 150 kwhs. per month @	3¢	3¢	4⅓¢	4⅓¢*
Next 350 " " " @	2¢	2¢	3¢	2½¢*
Next 1,000 " " " @	1¢	1¢	2¢	2¢*
Next 3,500 " " " @	0.8¢	0.8¢	1.8¢	1.8¢
Next 10,000 " " " @	0.8¢	0.8¢	0.8¢	0.8¢
Next 25,000 " " " @	0.6¢	0.6¢	0.6¢	0.6¢
Next 60,000 " " " @	0.4¢	0.4¢	0.4¢	0.4¢
Over 100,000 " " " @	0.3¢	0.3¢	0.3¢	0.3¢
Demand Charge:				
First 10 kws. of demand	None	None	None	None
Excess above 10 kws.	95¢	95¢	95¢	95¢
Minimum Bill (10 kws. demand or less)	$1.00	$1.00	$1.00	$1.00

* In Skamania County P.U.D. the first blocks of the commercial rate are 125, 250, and 1,125 kwhs., respectively.

power first in January, 1940, and later reduced its rates, effective with bills for June, 1940. The average reductions here were 10% for residential users and 5% for commercial lighting customers. This district had received a rate reduction a few months prior to acquisition of the properties by the Public Utility District and, compared with rates in effect during the first eight months of 1939, the new rates meant a reduction of about 20% for residential customers and about 11% for commercial lighting users.

When these public electric systems reduced their rates it was expected that the consumers of electricity would immediately respond to the lower prices by making large increases in their use of electricity. This expectation has been realized. Table III shows the sales of these four systems during the first eight months of 1940 compared with the same period in 1939. Total residential kilowatt-hours sold increased 51% on the average. Cascade Locks' sales to this class of users rose 78%, Forest Grove 47%, Canby 49%, and Skamania County Public Utility District 39%. Part of this increase resulted from the connection of new customers, which itself partly results from lowered rates, but increased sales per customer have been the prime factor. On the average, monthly sales per residential user during the first eight months of the year went up from 66 to 90 kwhs., or 36%. In Cascade Locks the unit consumption rose 61%, in Forest Grove

TABLE II. COMPARISON OF TYPICAL ELECTRIC BILLS BEFORE AND AFTER DISTRIBUTION OF BONNEVILLE POWER

	Residential 100 Kwhs.			Commercial Lighting 750 Kwhs. (6.0 kws.)		
	New Rate	Old Rate	Per Cent Reduction	New Rate	Old Rate	Per Cent Reduction
Forest Grove	$2.50	$3.64	31%	$14.00	$35.50	60%
Canby	2.50	3.37	26	14.00	30.75	54
Skamania County P.U.D.*	3.25	3.62	10	19.38	19.40	—
Cascade Locks	3.25	4.60	29	22.25	25.50	13

* Under the rates effective in the area served by Skamania County P.U.D. during the first 8 months of 1940, the residential bill for 100 kws. was $4.00 (reduction under new rates—19%), and the commercial lighting bill for 750 kwhs. was $20.08 (reduction under new rates—3%).

TABLE III. SALES OF ELECTRIC ENERGY BY PUBLICLY OWNED UTILITIES DISTRIBUTING BONNEVILLE POWER, FIRST EIGHT MONTHS, 1940 AND 1939

Item	Cascade Locks, Ore.			Forest Grove, Ore.			Canby, Ore.[a]			Skamania P.U.D.[b]			Total		
	1940	1939	Per Cent Change	1940	1939	Per Cent Change	1940	1939	Per Cent Change	1940	1939	Per Cent Change	1940	1939	Per Cent Change
Kwhs. Sold															
Residential	262,053	147,603	77.5%	781,371	530,964	47.2%	214,200	143,363	49.4%	178,101	128,139	39.0%	1,435,725	950,069	51.1%
Commercial and industrial	396,865	387,508	2.4	490,701	389,185	26.1	211,879[d]	134,809	57.2[d]	236,460	160,324	47.5	1,335,905	1,071,826	24.6[d]
Street lighting	21,261	5,079	—	93,805	97,800[e]	−4.1	16,157	16,150[e]	—	17,080	18,068	−5.5	148,303	137,097	8.2
Total to Ultimate Customers	680,179	540,190	25.9	1,365,877	1,017,949	34.2	442,236	294,322	50.3	431,641	306,531	40.8	2,919,933	2,158,992	35.2
Revenues															
Residential	$ 7,565	$ 7,466	1.3	$15,264	$17,616	−13.4	$4,084	$4,874	−16.2	$ 6,052	$ 5,899	2.6	$32,965	$35,855	− 8.1
Commercial and industrial	11,083	12,272	−9.7	10,085	14,065	−28.3	4,149	4,722	−12.1	6,229	5,540	12.4	31,546	36,599	−13.8
Street lighting	231	223	3.6	990	—	—	207	—	—	235	260	−9.6	1,663	483	—
Total from Ultimate Customers	$18,879	$19,961	−5.4	$26,339	$31,681	−16.9	$8,440	$9,596	−12.0	$12,516	$11,699	7.0	$66,174	$72,937	− 9.3
Customers (Average per Month)															
Residential	415	375	10.7	972	851	14.2	296	285	3.9	396	366	8.2	2,079[e]	1,877[e]	10.8
Commercial and industrial	108	106	1.9	203	182	11.5	95	87	9.2	109	105	3.8	515[e]	480[e]	7.3
Street lighting	1	1	—	1	1	—	1	1	—	1	3	−66.7	4[e]	6[e]	−33.3
Total Customers	524	482	8.7	1,176	1,034	13.7	392	373	5.1	506	474	6.8	2,598	2,363	9.9
Kwhs. per Customer per Month[f]															
Residential	79	49	61.2	100	78	28.2	103	72	43.1	64	50	28.0	90	66	36.4
Commercial and industrial	401	459	0.4	302	267	13.1	319	222	43.7	311	218	42.7	341	294	16.0
Revenue per Kwh.															
Residential	2.89¢	5.06¢	−42.9	1.95¢	3.32¢	−41.3	1.91¢	3.40¢	−43.8	3.40¢	4.60¢	−26.1	2.30¢	3.77¢	−39.0
Commercial and industrial	2.79	3.17	−12.0	2.06	3.61	−42.9	1.69	3.50	−44.0	2.63	3.46	−24.0	2.36	3.41	−30.8
Street lighting	1.09	4.38	−75.1	1.06	—	—	1.28	—	—	1.37	1.44	− 4.9	1.12	—	—
Revenue per Customer per Month[f]															
Residential	$ 2.28	$ 2.49	− 8.4	$1.96	$2.59	−24.3	$1.97	$2.44	−19.3	$2.18	$2.30	− 5.2	$2.07	$ 2.50	−17.2
Commercial and industrial	12.87	14.54	−11.5	6.20	9.64	−35.7	6.24	7.79	−19.9	8.18	7.53	8.6	8.06	10.04	−19.7

[a] Data for Canby are included for 7 months only since no Bonneville service was taken in January, 1940.
[b] Data for Skamania P.U.D. are included for 7 months only since comparative figures are not available for January, 1940.
[c] Estimate.
[d] 1940 commercial sales in Canby include sales to City Hall and water pump, which were served free in 1939 and therefore excluded from sales. The percentage increase in the first 8 months, 1940, excluding such sales, was 31.6% for Canby and 21.4% in total for all distributors.
[e] The total of average customers per month for each distributor; these figures were not used for computations of kilowatt-hour and revenue ratios, which are based on total monthly billings.
[f] These ratios are based on total customer billings, not average per month.

28%, in Canby 43%, and in the Skamania District, 28%.

Increases in commercial and industrial sales were not so large as for the residential class, but here also large added usage has occurred. Total commercial and industrial sales rose 21% on the average, and each system showed increases as follows: Cascade Locks 2%, Forest Grove 26%, Canby 32%, and Skamania District 48%. The showing in Cascade Locks is affected by the fact that a large construction camp which was served in 1939 was closed down during 1940.

Total sales of energy by these four public agencies were 35% larger during the first eight months of 1940 than in the comparable period of 1939.

One distributor's revenues from electric sales were greater in the first eight months of 1940 than in the similar period of 1939, despite the rate reductions made. This distributor was the Skamania County Public Utility District. In this District two rate reductions were made, and were more than recovered in the short space of one year. In the other communities revenues were lower in the first eight months of 1940 than in 1939 —in Cascade Locks 5% lower, in Canby 12% lower, and in Forest Grove 17% lower. In Cascade Locks the lower revenues may be attributed to the loss of certain commercial business, since residential revenues, where a 32% rate reduction was made, were slightly greater in the 1940 period. The rate cut for this class of customers was recovered in about six months' time. In Forest Grove and Canby it will take longer than eight months to recover the 30 to 40% rate reductions. Revenues per customer after the rate reductions have not increased to the averages prevailing before the rate reductions in any case except commercial revenues in the Skamania District, but in every instance substantial progress has been made toward recovery of revenue per customer to the same level as prevailed prior to the rate reduction.

Another evidence of the effect of rate reductions on the systems of these public agencies is found in the load factors before and after the rate cuts. "Load factor" may be defined in various ways, but reduced to the simplest terms it means the percentage of time that the greatest load during the period is used. The following table compares monthly load factors in the first month of delivery of Bonneville power with those in August, 1940:

	First Full Month of Bonneville Power Delivery		August 1940 Load Factor
	Month	Load Factor	
Cascade Locks.....	Aug., 1939	48.3%	55.2%
Forest Grove.....	Jan., 1940*	41.3	52.5
Canby.....	Feb., 1940	43.6	49.2
Skamania P.U.D....	Feb., 1940	48.8	55.0

* December, 1939, actual first month of delivery to Forest Grove, was a long month, about 35 days, for billing purposes.
Note: Interval used in measuring demands is 30 minutes.

It is apparent that without exception the system load factors improve when rates are cut. Hours of use of appliances and lights are increased, and the effect of such longer hour use of equipment is to improve load factors, thus reducing cost of supplying electricity.

Another prime question is continually asked: Will the rates being used by the distributors of Bonneville power pay out? Are they sufficient to meet all costs of service? The answer to this question is contained in Table IV, which shows the income account of each of the four public systems for the first eight months of 1940, except that the Canby statement is for the seven months ended with August, inasmuch as distribution of Bonneville power did not start until February.

The surplus earnings of the four systems during the period studied equaled 16½% of their combined revenues. These earnings are after provision for cost of power, labor, materials, taxes or payments in lieu of taxes, depreciation, and interest on debt and capital investment—that is, after providing for all costs of operation.

Provisions for amortization of debt have not been deducted in this statement of income, as such amortization is a question of cash resources rather than earnings. Such cash may be derived from other sources than net profits. Depreciation provisions can also be used for this purpose if not required for replacements of plant or new construction. However, in both Cascade Locks and Skamania net profits were more than sufficient to meet amortization needs. In both cases the first debt principal payment becoming due is $3,000, and the proportion of this amount applicable to an eight months' period would be $2,000. In Cascade Locks the profits were $1,359 in excess of this amortization requirement, or a margin of 7% of

TABLE IV. EARNINGS FOR PUBLICLY OWNED DISTRIBUTORS OF BONNEVILLE POWER COMPARED, FIRST EIGHT MONTHS, 1940

Item	Forest Grove	Cascade Locks	Canby‡	Skamania P.U.D.
Revenues				
Amounts received from customers for electric energy used*	$26,534	$19,547	$8,439	$14,390
Expenses				
Operating Expenses	12,542	9,332	4,937	8,103
Amounts spent for purchased power, labor, and materials for operating and maintaining the electric system				
Provision for taxes or equivalent funds set aside for payment to the city or other governmental bodies	3,200	2,090	527	461
Depreciation and amortization	2,480	2,320	438	1,020
Amounts set aside to take care of wear and tear of property used in supplying electric service†				
Total Expenses	$18,222	$13,742	$5,902	$9,584
Net Operating Revenues	$ 8,312	$ 5,805	$2,537	$4,806
Balance of revenue remaining after deducting items listed above				
Disposition of Net Revenues				
Interest on bonds	—	2,125	—	1,675
Interest on city's investment in electric system	5,000	—	875	—
Other miscellaneous items	—	321	—	135
Total Deductions	$ 5,000	$ 2,446	$ 875	$1,810
Net Profit	$ 3,312	$ 3,359	$1,662	$2,996
Cash represented by these net earnings may be used for principal payments on bonds, reserve funds, property additions, or working capital				

* These amounts also include some minor miscellaneous revenues.
† These funds may be used for property additions or replacements, applied to amortization of the utility's debt, or otherwise invested.
‡ Includes data for 7 months only since no Bonneville service was taken in January, 1940.

revenues. In Skamania County, the margin of profits above the amortization requirement was $996, also 7% of revenues.

The Forest Grove and Canby municipal plants have no bond-repayment problems, as they are free of debt. The amount of interest on the city's investment in the electric system shown in Table IV for these plants was computed at 6% of the net book value of electric property. This "interest" item was transferred to general city funds, and is an additional contribution to relieve taxpayers.

Allowances for taxes and tax equivalents in the three municipal plants ranged from 6% to 12% of revenues—6% in Canby, 11% in Cascade Locks, and 12% in Forest Grove. In these systems the deductions for taxes and tax equivalents are the same as the state and local property taxes which would be paid by similar private utilities. The Skamania District set aside funds for the Washington state gross revenue tax, which is the only tax the law permits such districts to pay at present. However, this District's earnings were sufficient to enable it to pay property taxes equal to those paid by the former private company. In 1939 this company reported property taxes for the Skamania County portion of its system equal to 1½% of revenues. The Public Utility District's margin of net profit above all financial requirements, including debt amortization, was 7% of its revenues in the first eight months of 1940.

On the basis of experience in the first few months of operation it appears that the rates being charged for the retail distribution of Bonneville power "pay out," in the sense that all these four systems are meeting their operating and financial charges and are accumulating surpluses. It should be clear that the wholesale cost of power included in the operating expenses of the distributors was computed at the standard wholesale rates for Bonneville power as approved by the Federal Power Commission.

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Urban Land

Kaemper, Otto. WOHNUNGSWIRTSCHAFT UND GRUNDKREDIT, MIT BESONDERER BETRACHTUNG DES NACHSTELLIGEN GRUNDKREDITS IM IN- UND AUSLANDE. (Unter Mitarbeit von Hans Haehling von Lanzenauer.) *Berlin: Walter de Gruyter & Co., 1938. pp. 485.*

The complexity of the housing problem makes it very difficult to deal with the subject in a comprehensive and exhaustive way. As yet no book on German housing deals with the problem in all its different phases.

Kaemper's book does not claim to fill the gap, but is confined to three major aspects of the problem: (1) the general progress of housing construction; (2) the evolution of real estate law and its relationship to housing developments; and (3) the nature and growth of real estate credit. The discussion of the first two aspects is limited to Germany. That of the third aspect covers quite a number of European countries, as well as the United States, and pays particular attention to second mortgage credit.

Prior to the World War first mortgage credit was usually granted up to 60% and junior credit up to 75% of the value of the property. By 1914, organized credit, i.e., credit furnished by financial institutions, had gradually supplanted the unorganized credit of private investors in the field of first mortgage lending. Junior financing, however, had remained the domain of the unorganized credit of private lenders.

The great destruction of wealth that occurred in the World War and the subsequent period of inflation brought about entirely new conditions for German housing. There was a great scarcity of capital. The accumulation of new savings advanced only slowly and did not progress far enough to make available sufficient capital for both first and second mortgage credit. Particularly serious was the deficiency of second mortgage credit which had to be met by new arrangements.

In discussing the various measures that have been taken to meet the new problems of junior financing the author distinguishes three major groups of action. The first group comprises the various measures taken in the free capital market. These include the activities of cooperative organizations as well as of organizations operating on the principles of private competitive enterprise. The second group comprises all those measures which, although likewise taken in the free capital market, are carried out under some form of public guidance and support. They embrace all financing done by public lending institutions as well as those operations which involve the granting of guarantees (Buergschaften) by public agencies in connection with furnishing second mortgage credit. The last group takes in all the different public measures that involve the direct supplying of special funds for housing purposes, making available funds out of general revenues, specific taxes, bond issues, and other sources. These financial operations are usually auxiliary measures taken for definitely delineated housing activities.

The granting of guarantees by public agencies has played a very important role in Germany in recent years. The device was adopted by the national government in 1930. In the first few years it did not show any results because of the weakness of the private capital market. But, as soon as economic recovery had set in, it turned out to be a means of mobilizing substantial funds for junior financing. But, however successful the system has been in this respect, it nevertheless involves a serious drawback—namely, the danger that these guarantees of the Reich may rise to an undesirably high level. As the system now stands, it can be regarded only as a temporary solution.

More recently several other suggestions have been made. One is to encourage the existing building and savings banks to extend their business to junior financing. Another is to organize the existing mortgage credit institutions into guarantee consortia and to have them guarantee second mortgages up to 90% of the loan, with the Reich guaranteeing the last 10%. Whether any of these proposals will finally be adopted or whether some other device will be developed remains to be seen.

Those who want to study German housing, but particularly those interested in problems of junior financing, will find a good deal of useful information in this book.

Washington, D. C. ERICH KRAEMER

Bodfish, Morton, editor. 1939 SAVINGS AND LOAN ANNALS. *Chicago: United States Savings and Loan League, 1940. pp. xi, 912. $5.*

This tenth volume in the series of *Savings and Loan Annals* supplies a convenient milestone at which to pause and look back over the past decade. Mere comparison of the tables of contents of the 1930 and the current volume is sufficient to show what marked changes have occurred in the savings and loan business itself as well as in the wide range of interests and problems that have come to impinge on the business of mortgage lending generally. Among the topics not even on the horizon as immediate savings and loan problems in 1930 were public housing, investment of excess funds, bonus and retirement plans for savings and loan personnel. All are treated in one or more articles in the 1939 edition. Another important item considered in the current volume is the effect of war and a war economy on mortgage lending, financial policy, and business in general. The book also contains the usual annual statistics of the savings and loan business and complete listing of savings and loan personnel, both private and governmental.

HELEN C. MONCHOW

Of the Journal Staff

Land Resources

Ely, Richard T. and Wehrwein, George S. LAND ECONOMICS. *New York: Macmillan Co., 1940. pp. xiii, 512. $4.00.*

This important text of two scholars whose names are most intimately connected with the foundation and growth of "land economics" as a separate branch of economics in English-speaking countries crowns more than 20 years of research and teaching. It represents a thorough revision of the widely known mimeographed volumes published by the same authors under the same title in 1928 and 1931 and gives particular attention to the rapid development of the field during the depression and post-depression eras.

A few general comments on the organization and the approach of the book may be permitted before some more detailed questions are taken up. The first five chapters present what may be called the "principles" of land economics. The following nine chapters aim at applying these principles to particular kinds of land. This organization of the book has great advantages because, as the authors succinctly observe,

> "it is important that the land economist be equipped with a general knowledge of all types of land and understand their inter-relationship before concentrating on a specific kind of land or on a given region."

However, some important aspects of land economics common to all kinds of land are not dealt with in principle but in connection with each kind of land. These aspects are land conservation, land tenure, land taxation, public ownership of land, public control of land use, and others. Their treatment in connection with individual kinds of land makes repetitions and omissions almost unavoidable and gives less focus to the general theoretical analysis of principal issues. Excellent paragraphs on conservation, for instance, can be found in most of the last nine chapters but the economic and social contours of the conservation problem as a whole do not appear clearly. Land taxes are mentioned repeatedly but there is little discussion of the principles governing their *modus operandi* and their relation to some of the other important aspects of land economics mentioned. The authors have—doubtless intentionally—limited the analysis of more complex and controversial problems in favor of a factual presentation of views of other workers, thus offering numerous valuable leads for further study. This makes the book a useful text for instruction in the hands of a teacher who can help his students to follow the leads given; but some readers may regret that highly interesting lines of reasoning break off just when the problem begins to become intriguing.

The foregoing applies to the discussion not only of conservation and taxation but also of property and public controls. In view of previous contributions, particularly by the senior author, one might have expected a broader philosophical setting of the property concept as it developed, let us say, from Hobbes to Reinhold Noyes through the writings of Locke, Hume, Bentham, and J. S. Mill, and for a more analytical appraisal of possible distributions of property rights among groups of individuals and public bodies. The authors deal in a balanced descriptive way with some historically important distributions of the "bundle" of property rights. The present generation of students lives in a time during which a redistribution of property rights, particularly in land, is

proceeding again at a rapid pace. A critical appraisal of the ideas of Henry George, Silvio Gesell, and other "land reformers" in the light of present economic conditions and an analysis of modernized versions of past forms of distributions of property rights, such as have recently emerged in Russia, Germany, and other countries, may be a valuable guide to a generation of students who will face similar problems in their own country. Problems of "land reform" are particularly likely to be discussed in emotional and partisan fashion.

The concept "land economics" is briefly discussed in the preface. Land economics is defined as

> "the science which deals with the utilization of the earth's surface, or space, as conditioned by property and other institutions and which includes the use of natural forces and productive powers above or below that space over which the owner has property rights."

The first part of the definition interprets land as space. Land economics therefore becomes identical with an approach to economic phenomena which for agricultural land utilization was developed by von Thünen and Theodor Brinkmann and for individual land utilization by Alfred Weber and the controversies started by his famous work and still continuing.[1] The second part of the definition interprets land as "natural agent." Land economics therefore becomes a branch of economics which includes such applied branches as mining economics, water economics, and power economics. A considerable part of the book is devoted to the latter problems. On the other hand, the phrase "as conditioned by property and other institutions" comprises clearly such topics as land credit, land inheritance, land transfer, land appraisal, and land settlement, which are treated not at all or only in passing. Explanation and effect of the "utilization of the earth's surface" transcend the realm of economics and include social sciences like geography, sociology, anthropology, and others. It is not intended here to criticize the definition of land economics presented by the authors although a stricter interpretation of land as space and, accordingly, a confinement of land economics to space economics may seem advisable from some angles. It is merely suggested that the recent expansion of research and teaching in the field justifies a more thorough discussion of the character, limits, tools, and objectives of land economics than can be presented in one sentence or even in a preface of 2½ pages. Such an orientation presented at the outset would have favored the analytical portions of the book and would have been particularly welcome because the senior author is the founder of a branch of economics which in this form does not exist outside the United States.

Turning now to individual chapters, it is obvious that the first two, "Land and Population" and "Land as Nature," are only intended to give the student a minimum background in population problems and physical geography. Nevertheless, a somewhat more detailed discussion of such controversial subjects as the measuring of "population pressure" and the criteria of the optimum "man-land ratio" may have been justified (p. 23). In the second chapter tribute is paid correctly to the work of George P. Marsh (p. 27) who is far too little known among economists in spite of the fact that he presented in 1864 the physical reasons for social action in the field of land conservation in almost classical fashion. General familiarity with the fields of physical and economic geography is certainly a prerequisite for the student of land economics.

The third chapter, "Land as Space," contains excellent observations on the expansibility of economic space (p. 54) and develops the theory of economic location, of "situs," in close agreement with von Thünen's analysis (p. 65). The various refinements introduced by Theodor Brinkmann are not mentioned and references to Alfred Weber appear much later in the discussion of urban land. One may question whether the treatment of the "law of diminishing returns" (p. 50) belongs in this chapter or should not be taken up with the "economics of land utilization" in the fifth chapter. The general phenomenon of decreasing physical return increments from fixed factors if variable factors are added has no particular relation to the economics of space.

The fourth chapter, "Land as Property,"

[1] In English literature, for instance: Predöhl, Andreas, "The Theory of Location in Its Relation to General Economics," 36 *Journal of Political Economy* 371–90 (June, 1928); Daggett, Stuart A., *Principles of Inland Transportation* (New York and London: Harper & Bros., 1934); Dennison, S. R., *The Location of Industry and the Depressed Areas* (Oxford: Oxford University Press, 1939).

is a condensed but balanced and nevertheless stimulating presentation of a complex subject. As said above, discussion of controversial issues is somewhat sacrificed to factual description of historical institutions. Among the latter the "Allmende" which was an important institution common to many parts of central Europe and still exists in various forms is referred to in passing as the "Allemande" of Switzerland (p. 78).

The fifth chapter, "Economics of Land Utilization," presents what some economists will call the essence of land economics. It deals with such problems as "proportioning of factors of production," "rents," "value of land," "influence of size of the units of input on proportionality," "competition of land uses," "comparative costs and advantages," "costs of producing economic land"—in short, with the principles of production economics as applied to land. The treatment is naturally highly condensed. It might have been desirable to expand the discussion of certain problems, for instance, of fixity of costs over ranges of production velocity—discussed as "size of units of input"—and over time, and of land value even if a second or third chapter had become necessary. The authors themselves call their discussion of land value a "streamlined statement" (p. 121). The important effect of joint costs and joint returns upon land utilization is not mentioned. These are some of the cases cited above which might have gained from an orientative discussion of what land economics is and where the emphasis in land economics should be placed. Some sentences—for example, "it must not be concluded that economic competition will of itself direct the land into uses most beneficial to society" (p. 140) and "the valuation of a building is based upon a series of incomes for a definite number of years, whereas the valuation of land is based upon an indefinite series of incomes" (p. 152)—point to a host of problems in land utilization and valuation, the analysis of which may well have been developed further.

The following chapters (6–13) deal with particular kinds of land. They are highly interesting throughout. In Chapter 6 ("Agricultural Land") the purely descriptive historical section on the development and reclamation of agricultural land (pp. 168 ff.) could have been reduced in favor of those characteristics which differentiate farming from other land uses. The next chapter is divided between agricultural land tenure and soil conservation. Most workers in these fields will agree with the many good statements made but may wish that the authors had developed them further. Agricultural economists in the western part of the United States will be particularly grateful for the fact that a separate chapter is devoted to the problem of agricultural land under arid conditions. J. W. Powell's work, which anticipated recent developments in land policy more than half a century ago, is properly acknowledged. Some of the observations, however, apply to an economy in rapid transition. The West is just emerging from this state and may reach economic maturity before long. In a more stable western economy certain statements—for example, "as soon as the ranchman has to depend upon supplemental feed excessive costs begin to appear" (p. 244) and (with respect to federal reclamation undertakings) "the creation of taxable values, new centers of population and new arable lands is warranted as one way for the federal government to reimburse the West for its contribution to the cause of conservation" (p. 268)—may require some qualification.

The following chapters on forest land, recreational land, water, mineral, and power resources, and urban land contain a wealth of information and many references for further study. If space would permit, some questions might be raised, for instance, with respect to the statement that water power cannot "furnish power for ships or take the place of gasoline in automobiles, trucks, and tractors" (p. 400) and the acceptance of Zimmermann's definition of conservation (p. 469).

It may be emphasized that these comments are not intended to detract from the value of the book. On the contrary, the reviewer feels that this text which can without hesitation be called the best in the field of land economics deserves closest attention by economists, geographers, and others interested in land economics. The wish may be added that the authors will find occasion to help with their unparalleled experience to orient the field of land economics further—possibly with another volume addressed more to the profession than to the student and dealing more analytically than descriptively with the land policy problems of today. The latter would follow naturally from the institutional approach which, with justi-

fication, is stressed throughout the book.

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Public Utilities

Bauer, John, Gold, Nathaniel, and Shaw, Alfred E. THE ELECTRIC POWER INDUSTRY. *New York: Harper & Brothers, 1939. pp. xii, 347. $3.50.*

This is a useful and workmanlike treatment of significant structural, operating, and control problems of the electric power industry. The authors analyze the present attainable potentialities of the industry—"the paramount public utility"—in light of practical technical developments, and estimate prices for electricity which might economically be set; examine critically the industry's financial organization and managerial policies; and, in terms of stated objectives, review the record of commission and court regulation, propose improvements in regulatory procedure, and conclude on a note highly favorable to state and municipal ownership and operation. The authors' goal for the industry "is to make adequate electric power available for all justified purposes at maximum utilization consistent with lowest attainable cost."

The first seven chapters afford a valuable summary of recent studies on the cost components of production and distribution of electricity, and, on the basis of carefully computed ranges of costs reflecting varying assumptions, the authors set out actual price patterns for the marketing of electric energy.

Continuing, the financial abuses which have characterized the industry are effectively dramatized. Although "absentee" ownership is, perhaps, overemphasized, a realistic picture is presented of the legal and economic forces which permitted the capitalization of, and realization on anticipated and excessive earnings of regulated electric properties. The shortcomings of the industry's "integration movement," stemming from the struggle for control of lucrative operating properties, are high-lighted by the authors' concrete plan for the integration of operating electric properties in New York and New Jersey.

Although the book offers detailed recommendations for the rehabilitation and strengthening of commission regulation, the authors are not sanguine over the qualitative improvements which are likely to accrue. They doubt seriously whether even the newer federal agencies can significantly augment and make positive the essentially passive influence which state utilities commissions have exerted to date. It is proposed that steps be taken to implement a broad program of public ownership and operation of the power industry, and the requisite steps are outlined.

This book, like all of Bauer's books, is positive and provocative; and, in addition to the dissent which will be provoked in many quarters by its "ideology," the very concreteness with which problems and proposals are advanced is bound to invite disagreement on details and degrees from readers who are none the less sympathetic to the authors' general approach. The reviewers fall in the latter group. Some of the assumptions in the cost chapters are too "pat"; the mechanics whereby private properties are to be transferred to public ownership are not convincingly established; and the proposal to restore municipal "home-rule" under the appellate authority of state commissions will elicit slight enthusiasm from those familiar with the "divide and conquer" tactics which utilities have been able to employ in Ohio since 1913 under just such an arrangement. And, although in no sense decrying the movement, it seems worth while to suggest with reference to broad programs for the general substitution of public for private ownership (as distinct from such shifts in individual instances in the light of local conditions), that the existence of a public opinion and public administrative machinery of such character and caliber as would be necessary to insure success for the venture, could also do much toward making regulated private ownership so successful as to argue against its replacement.

Oberlin College BEN LEWIS
Cornell University WILLIAM H. BRAY

Index to

THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

VOLUME XVI

February, 1940—November, 1940

LEADING ARTICLES

ALBERS J. M. Progress in County Zoning: Marathon County, Wisconsin....393–402
BACON, EDMUND, N. A Diagnosis and Suggested Treatment of an Urban Community's Land Problem....72–88
BAILEY, WILLIAM L. Appraising Urban Communities: Techniques and Objectives....1–7
BAKER, J. A. The Graduated Farm Land Transfer Stamp Tax....21–29
BARNES, IRSTON R. Shall Going Value Be Included in the Rate-Base?....286–293, 430–437
CLENDENIN, J. C. Crop Insurance—An Experiment in Farm-Income Stabilization....277–285
COLBERT, ASEL R. The Transition to Depreciation Accounting....129–136
DOUGALL, HERBERT E. A Review of Railroad Financing, 1920–1938:
I. Volume and Cost of Railroad Capital....207–213
II. Types and Methods of Financing....306–317
(Loring C. Farwell, co-author)
ERDMANN, ARTHUR G. The Rural Zoning Ordinance of Cook County....438–442
FARWELL, LORING C. A Review of Railroad Financing, 1920–1938:
I. Volume and Cost of Railroad Capital....207–213
II. Types and Methods of Financing....306–317
(Herbert E. Dougall, co-author)
III. Funds for Capital Purposes....443–454
GLAESER, MARTIN G. The Wisconsin Telephone Case....37–46
GRAY, HORACE M. The Passing of the Public Utility Concept....8–20
GREEN, HOWARD WHIPPLE. Origin and Development of a Continuous Real Property Inventory....325–334
GREENE, FRED T. Significant Post-Depression Changes in Savings and Loan Practices....30–36
HAMMAR, CONRAD T. Regulation or Development for the Missouri Ozarks....159–167
HOAGLAND, HENRY E. Housing and National Defense....377–381
HOWARD, STANLEY E. The Trust Indenture Act of 1939....168–180
HOYT, HOMER. Urban Decentralization....270–276
HURLBURT, VIRGIL. Rural Zoning for Missouri?..151–158
KEYES, SCOTT. Converted Residences and the Supply of Housing....47–51
LEPAWSKY, ALBERT. City Plan: Metro Style..137–150
MARTIN, JAMES W. Corporate Taxes and the Assessment of Public Utility Operating Property....262–269
MORTENSON, W. P. II. Legal Possibilities and Limitations of Milk Distribution as a Public Utility....61–71
PARRY, CORLISS L. European Insurance Companies and Real Estate: With Particular Reference to Housing....294–305
PEGRUM, D. F. The Public Corporation as a Regulatory Device....335–343
PHILLIPS, EDMUND J., JR. Diversion of Freight Traffic from the Railroads....403–415
RILEY, RODERICK H. Is Fair Return Appropriate for Municipal Utilities?....52–60
SMITH, NELSON LEE. I. The Outlook in Regulation....386–392
TAYLOR, HENRY C. The Farmer in the Groupistic Regime....253–261
TETREAU, E. D. The Location of Heirs and the Value of Their Inheritances: Farm and City Estates....416–429
THATCHER, LIONEL W. II. Financial and Depreciation History of the Utah Power and Light Company....89–95
TIERNEY, JOHN L. "Fair Value" and the Deficiency Judgment....181–195
TORGERSON, HAROLD W. Agricultural Finance in the United States....196–206, 318–324
WOOD, ELIZABETH. The Role of the Government in Defense Housing....382–385

DEPARTMENT ARTICLES

Avoiding "Census Jitters"....349–351
Backward Step in Zoning, A....455–457
Bonneville Resale Rates Pay Out....487–491
Chicago Gas Case, The....236–241
Cook County Amends Rural Subdivision Regulations....218–219
Coordination of the Nebraska Public Power Districts....481–483
Defense Housing....344–345
Defense Housing and the Lanham Bill....457–459
Draft and Real Estate Transactions, The....459–463
Exemption of Small Rural Telephone Companies from the Wage and Hour Act....117–120
Extended Functions for Institutional Landowners....357–362
Federal Inducements for Small-House Construction....101–102
Federal Regulation of Water Carriers....478–481
Incentive Plan of Rate Adjustment, An....475–478
Increased Gas Rates Based upon Higher Taxes..233–235
Indexes of Construction Cost for Public Utility Industries....363–368
Land Utilization in China: A Critique of Methodology....226–229
Legal Aspects of Municipal Land Ownership..216–218
Low-Cost Housing under the USHA Experiment....96–99
New Chicago Plan Commission, The....99–101

New Inquiries for the Census of 1940.....102–104
New Price Policy for the Railroads, A: Quantity or Mutiple-Car Rates.....230–233
New York City Revises Its Zoning Ordinance..345–349
Off-Street Parking: A City Planning Problem..464–467
Policy for Use of State-Owned Land in Arkansas.....470–474
Public Utility Financing:
In the Fourth Quarter of 1939 and a Summary of the Year, 1939.....120–125
In the First Quarter of 1940.....242–244
In the Second and Third Quarters of 1940 483–487
Rate-Making by Interim Order.....368–371
Rural Zoning in Minnesota.....105–109
Social Security: A New Consideration in Submarginal Land Policy.....468–470
Some Economic Aspects of Western Range-Land Conservation.....222–226
Southern Pine Case, The.....214–216
State Regulation of Flood-Plain Use.....352–357
State Rural Land-Use Legislation in 1939.....110–116
Urban Redevelopment Corporations Act Vetoed by New York Governor.....219–221

BOOK REVIEWS

ARONOVICI, CAROL. *Housing the Masses*..... 126
BAKER, O. E., BORSODI, RALPH and WILSON, M. L. *Agriculture in Modern Life*.....249
BAUER, JOHN, GOLD, NATHANIEL, and SHAW, ALFRED E. *The Electric Power Industry*.....496
BODFISH, MORTON, editor. *1939 Savings and Loan Annals*.....493
Commissioner for the Special Areas (England and Wales). *Report of the Committee of Enquiry into Land Settlement*.....248
DAVIS, JOSEPH S. *On Agricultural Policy, 1926–1938*.251
DRELLICH, EDITH BERGER and EMERY, ANDREE. *Rent Control in War and Peace*.. 372
ELY, RICHARD T. and WEHRWEIN, GEORGE S. *Land Economics*.....493
HEALY, KENT T. *The Economics of Transportation in America*.....375
KAEMPER, OTTO. *Wohnungswirtschaft und Grundkredit, mit besonderer Betrachtung des Machstelligen Grundkredits im In- und Auslande*.....492
LEWIS, HAROLD M. *City Planning: Why and How*..246
LUTZ, HARLEY L. *The Taxation of Railroads in New Jersey*.....374
MANDEL, H. ROBERT. *Real Estate Management*....372
MARQUIS, RALPH W. *Economics of Private Forestry*..127
MURRAY, WILLIAM G. *Farm Appraisal*.....373
Royal Commission on the Distribution of the Industrial Population. *Report*, Cmd. 6153.....246
Urban Land Appraisal.....247
WEIMER, ARTHUR M. and HOYT, HOMER. *Principles of Urban Real Estate*.....245

SUBJECT MATTER

A

Accounting, public utility
see Depreciation accounting
Agricultural finance in the United States
current problems in
FCA, status of.....318
government investment in farm credit agencies..323
interest rates, reduction of.....321
financing agriculture today
farm mortage debt.....196
sources of intermediate and short-term loans..201
sources of mortgage loans. 197
Agricultural land
see Agricultural finance; Inheritance, effect of; Institutional landowners; Land transfer stamp tax; Land-use legislation, rural; State-owned land; Zoning, rural
Agriculture
see Census of 1940; Crop insurance; Farm problem
Anti-trust action
see Lumber industry
Appraising, real estate
see Deficiency judgments
Arizona
see Inheritance, effect of
Arkansas
see State-owned land
Assessment, public utility
see Corporate taxes

B

Bankhead-Jones Farm Tenant Act.....200
Blighted areas
see Decentralization; Flint, Mich.; Urban Redevelopment Corporations Act
Bonneville resale rates, results under.....487
British Broadcasting Corporation
see Public corporation
Buffalo, N. Y.
see Off-street parking
Building and loan associations
see Savings and loan practices
Building codes
see Off-street parking
Building industry
see Housing, for defense; Lumber industry; Residential construction

C

Capital, cost of
see Financing, public utility; Railroad financing
Census of 1940, new inquiries for..... 102
see also Population statistics, urban
Central Electricity Board
see Public corporation
Chicago Gas case.....236
Chicago Plan Commission, legal basis of.....100
see also City planning
China, land utilization in
research methodology examined.....226
City estates
see Inheritance, effect of
City planning, for metropolitan areas
administrative techniques.....149
land use, problems of.....143
metropolitan planning, techniques of.....145
planning concept enlarged.....146
population movements.....139
suburbanization, causes of.....140
underlying forces.....141

see also Chicago Plan Commission; Decentralization; New York City; Off-street parking; Urban Redevelopment Corporations Act
Cleveland, Ohio
see Real property inventory
Commodity Credit Corporation....203
Community appraisal
see Urban communities, appraisal of
Concord Electric Co....390, 475
see also Sliding scale agreements
Conscription
see Draft
Conservation
see Flood-plain regulation; Land-use legislation; Range land
Construction costs, public utility
see Index numbers
Construction industry
see Housing, for defense
Cook County, Illinois
see Subdivisions, rural; Zoning, rural
Corporate taxes
and utility assessment
capital transactions, effect of....265
capitalization structure, effect of....264
other income, effect of....264
proposed solution....266
County zoning
in Marathon Co., Wis.
administration....401
Board of Adjustment....402
enactment procedure....396
highway setbacks....400
ordinance described....398
Wisconsin background....394
see also Subdivisions, rural; Zoning, rural
Crop insurance, and farm-income stabilization
operating expenses....281
operating losses sustained....280
opinions of farmers....283
plan of insurance....278
premium rates, determination of....279

D

Decentralization, urban
defined....270
forces contributing to....274
process of....272
remedies for....275
see also City planning
Defense housing
see Housing, for defense
Deficiency judgments, and "fair value"
deficiency judgment as secondary security....190
legislation, purpose of....193
legislative changes....183
third party bidding, absence of....188
"value," determination of....186
"value" vs. "price"....191
Demolition
see Off-street parking
Depreciation
see Depreciation accounting; Utah Power & Light Co.
Depreciation accounting, transition to
acquisition adjustment account....133
depreciation rates certified....131
effect on service rates....135
reserves, improvement in....134
retirement-reserve method, experience under....129
retirement-reserve method explained....129
statutory background....130
Draft, and real estate transactions....459

E

Electric rates
see Bonneville resale rates; Sliding scale agreements
Electric utilities
see Bonneville resale rates; Public power districts; Sliding scale agreements; Utah Power & Light Co.
Eminent domain
see Land ownership, municipal; Urban Redevelopment Corporations Act

F

Fair Labor Standards Act....117
Farm Credit Administration....202, 318
see also Agricultural finance
Farm estates
see Inheritance, effect of
Farm income
see Crop insurance; Farm problem
Farm land
see Land transfer stamp tax
Farm problem
competition limited....255
farmers enter groupistic struggle....256
interdependence of groups....259
intergroup cooperation....260
proposed programs, evolution of....254
Farm Security Administration....200
Farm tenancy
see Institutional landowners; Land-use legislation, rural
Federal Crop Insurance Corporation....277
Federal Farm Mortgage Corporation....199
Federal Housing Administration....101
see also Housing, low-cost; Residential construction
Federal land banks....198
Federal Works Administration
see Housing, for defense
Financing, public utility
fourth quarter, 1939....120
year, 1939....121
first quarter, 1940....242
second and third quarters, 1940....483
see also Railroad financing; Trust Indenture Act of 1939
Flint, Michigan
dwellings, condition of....77
recommended program....86
single-family lots, distribution of....75
tax delinquent land....83
utilities, extent and cost of installation....81
vacant subdivisions, extent and usability of....79
Flood-plain regulation, by states....352
Foreclosure
see Deficiency judgments
Forest land
see Zoning, rural, for the Ozarks
Freight rates, quantity or multiple-car....230
Freight traffic
diversion of, from railroads
assumptions considered....408
diversion defined....403
diversion vs. decreased production losses....409
diversion-measurement problem....403

freight-traffic unit, selection of....405
ICC studies....406
production indexes as reference media....404
production-reference index, design of....405

G

Gas rates, and higher taxes....233
see also Chicago Gas case
Gas utilities
see Chicago Gas case; Gas rates; Rate-making
Going value, in rate-base
components of....287
economic and legal status of....430
measures of....288
nature of....286
U.S. Supreme Court, attitude of....433
Government, cost of
see Zoning, rural, for the Ozarks
Grazing land
see Land-use legislation, rural; Range land; Zoning, rural, for the Ozarks
Great Britain
see Public corporation

H

Home financing
see Insurance companies, European; Residential construction; Savings and loan practices
Housing
for defense
authorization for government construction....344
Lanham Bill and....457
problem of
long range view....379
who shall supply defense housing....380
World War I, lessons of....378
role of government in
larger communities, problem in....383
metropolitan cities, problem in....384
small communities, problem in....382
low-cost
under USHA experiment....96
supply of
converted residences and
cost of conversion....49
dwelling units added....49
rents....50
volume of conversion....48
see also Census of 1940; City planning; Draft; Flint, Michigan; Insurance companies, European; Real property inventory; Residential construction; Urban Redevelopment Corporations Act
Housing Census of 1940
see Census of 1940; Real property inventory
Hunt et al., State ex rel. Morehouse v.....455

I

Illinois Commerce Com. v. Natural Gas Pipeline Co. of America....368
Index numbers
of public utility construction costs....363
Inheritance, effect of
city estates, composition of....426
farm estates, composition of....424
farm-to-city flow of wealth....423
heirs to farm estates....417
implications....428
location of city-estate heirs and their shares....421
location of farm-estate heirs and their shares....418
Institutional landowners, extended functions of....357
Insurance companies, European
and real estate
debentures....297
methods of financing....294
mortgage lending....295
operating results....304
outright ownership....298, 301
Insured mortgages
see Residential construction
Interest rates
see Agricultural finance; Railroad financing; Savings and loan practices
Interstate Commerce Commission
see Freight rates; Freight traffic; Railroad financing; Water carriers
Irrigation
see Public power districts

J

Joint stock land banks....200

L

Labor, public utility
see Telephone utilities
Land classification
see State-owned land
Land contracts
see Draft
Land ownership, municipal....216
Land planning
see Census of 1940; Chicago Plan Commission; County zoning; Decentralization; Flint, Michigan; Flood-plain regulation; Land ownership, municipal; Land-use legislation; New York City; Range land; Social security; Subdivisions, rural; Urban communities, appraisal of; Urban Redevelopment Corporations Act; Zoning, rural
Land policy
see Social security
Land settlement
see State-owned land; Zoning, rural, for the Ozarks
Land speculation
see Land transfer stamp tax
Land tenure
see Inheritance, effect of; Institutional landowners; Land-use legislation, rural
Land transfer stamp tax, for farm land
administrative considerations....26
economic effects of....27
elements for control device....23
graduated stamp tax....24
legal considerations....29
stamp tax on conveyances....21
Land-use legislation, rural, in 1939....110
Land-use regulation
see Flood-plain regulation
Land utilization
see China; County zoning; Flood-plain regulation; Range land; Social security; Zoning, rural
Land value
see Land transfer stamp tax
Landed property
see Inheritance, effect of
Lanham Bill
see Housing, for defense
London Passenger Transport Board
see Public corporation
Lumber industry, anti-trust action against....214

M

Madison, Wis.
see Housing, supply of; Non-conforming use
Marathon Co., Wis.
see County zoning
Merchandising, public utility
see Chicago Gas case
Metropolitanism
see City planning; Population statistics, urban
Milk distribution, as public utility
Constitution, interpretation of..... 68
economic savings, effect of..... 70
public welfare, importance of..... 67
unification, an established trend..... 62
Minnesota
see Zoning, rural
Missouri
see Zoning, rural
Molasses, New Orleans to Peoria & Pekin.....231
Mortgage financing
see Agricultural finance; Deficiency judgments; Insurance companies, European; Residential construction; Savings and loan practices
Mortgage moratoria
see Deficiency judgments; Draft
Mortgage payments
see Draft
Municipal utilities, fair return for
fair return and public policy..... 57
municipalities in proprietory or private capacities. 55
recent regulatory pronouncements..... 52

N

National Guard Act, 1940.....459
National income, farmers' share
see Farm problem
Natural Gas Act.....369
Natural Gas Pipeline Co. of America, Illinois Commerce Com. v......368
Nebraska
see Public power districts
New Hampshire
see Sliding scale agreements
New Jersey
see Flood-plain regulation
New York City, zoning ordinance revised.....345
New York Civil Practice Act.....183
New York State
see Flood-plain regulation
Non-conforming use
regulation of, tested.....455

O

Off-street parking.....464
Ohio
see Inheritance, effect of
Ozarks
see Zoning, rural

P

Parking problem
see Off-street parking
Pennsylvania
see Flood-plain regulation
Peoples Gas Light & Coke Co. v. Slattery.....236
Pipelines
see Rate-making
Population
see Census of 1940
Population movements
see Inheritance, effect of
Population statistics, urban.....349
Public corporation, as a regulatory device
conflicts, reconciliation of.....336
experiments appraised.....340
Great Britain's experiments.....337
regulatory problem.....335
Public lands, rights in
see Draft
Public ownership
see Municipal utilities; Public corporation
Public power districts
coordination in Nebraska.....481
Public utilities
see Bonneville resale rates; Chicago Gas case; Corporate taxes; Depreciation accounting; Financing, public utility; Freight traffic; Gas rates; Going value; Index numbers; Milk distribution; Municipal utilities; Public corporation; Public power districts; Public utility concept; Railroad financing; Rate-making; Regulation, outlook for; Sliding scale agreements; Telephone utilities; Trust Indenture Act of 1939; Utah Power & Light Co.; Water carriers; Wisconsin Telephone case
Public utility concept, passing of
concept in twentieth century..... 9
obsolescence of concept..... 16
uses and abuses of concept..... 10

R

Railroad financing, 1920–1938
funds for capital purposes
contributing groups and types of financing....451
credit obligations as source of funds.....446
income accounts as source of funds.....448
methods of measurement.....444
stock as source of funds.....448
types and methods of
capital structure.....306
contributors and contributions.....311
financial policies.....307
volume and cost of capital
cost of borrowed capital.....210
new issues, volume of.....207
Railroads
see Corporate taxes; Freight rates; Freight traffic; Railroad financing
Range land, conservation of.....222
Rate of return
see Chicago Gas case; Gas utilities; Municipal utilities; Utah Power & Light Co.; Wisconsin Telephone case
Rate-base
see Chicago Gas case; Going value; Rate-making; Wisconsin Telephone case
Rate-making
by interim order.....368
see also Sliding scale agreements
Rates, public utility
see Bonneville resale rates; Gas rates; Rate-making; Regulation, outlook for; Sliding scale agreements
Real estate
see City planning; Decentralization; Draft; Insurance companies, European
Real estate contracts
see Draft
Real property inventory, continuous
Cleveland criteria.....328
Cleveland inventory as model.....326

continuous enterprise, organization of.....333
extent of annual Cleveland data.....330
Recreational land
see Zoning, rural, for the Ozarks
Regulation
see Chicago Gas case; Corporate taxes; Depreciation accounting; Gas rates; Going Value; Index numbers; Milk distribution; Municipal utilities; Public corporation; Public utility concept; Railroad financing; Rate-making; Sliding scale agreements; Telephone utilities; Trust Indenture Act of 1939; Utah Power & Light Co.; Water carriers; Wisconsin Telephone case
Regulation, outlook for
under normal conditions
ancillary activities.....391
rates.....387
service.....386
Rental payments
see Draft
Residental construction, federal inducements for...101
see also Housing, low-cost; Housing, supply of
Rochester Gas & Electric Corp., Re.....233

S

Savings and loan practices
post-depression changes in
investment functions, improvements in..... 34
lending policies, changes in..... 31
service to borrowers..... 33
Security regulation
see Trust Indenture Act of 1939
Selective Training and Service Act, 1940.....459
Service, public utility
see Regulation, outlook for
Slattery, Peoples Gas Light & Coke Co. v......236
Sliding scale agreements: a variation.....475
see also Regulation, outlook for
Slum clearance
see Decentralization; Urban Redevelopment Corporations Act
Social security
and submarginal land policy.....468
Soil conservation
see Institutional landowners; Land-use legislation, rural
Soldiers and Sailors Civil Relief Act of 1940.....459
State ex rel. Morehouse v. Hunt et al......455
State-owned land
policy for use of, in Arkansas.....470
Statutes of limitation
see Draft
Subdivision
see Flint, Michigan
Subdivisions, rural
regulation of, in Cook Co., Ill.....218
Submarginal land
see Social security
Suburbanism
see Population statistics, urban

T

Tax and assessment payments
see Draft
Tax delinquency
see Flint, Michigan; Off-street parking; State-owned land
Tax limitation
see Urban Redevelopment Corporations Act
Taxation, land
see Decentralization; Land transfer stamp tax; Land-use legislation, rural; Urban Redevelopment Corporations Act
Taxation, public utility
see Chicago Gas case; Corporate taxes; Gas rates; Municipal utilities
Taylor Grazing Act.....225
Telephone utilities
small rural, under Wage and Hour Act.....117
see also Wisconsin Telephone case
Temporary rates
see Regulation, outlook for
Tenancy
see Institutional landowners; Land-use legislation, rural
Trade associations
see Lumber industry
Transportation
see Freight rates; Freight traffic; Railroad financing; Water carriers
Trust Indenture Act of 1939
claims vs. obligor.....172
qualifying of indentures.....169
reports of obligor.....175
reports of trustee.....174
trustees, duties and responsibilities of.....176
trustees, eligibility and disqualification of.....171

U

Unemployment
see Social security
Uniform Mortgage Act.....190
Urban communities, appraisal of
pioneer appraisals..... 3
relationships vs. size..... 2
Thorndike's appraisal evaluated..... 4
see also Population statistics, urban
Urban estates
see Inheritance, effect of
Urban land
see Chicago Plan Commission; City planning; Decentralization; Flint, Michigan; Flood-plain regulation; Inheritance, effect of; Land ownership, municipal; Real property inventory; Subdivisions, rural; Urban communities, appraisal of
Urban Redevelopment Corporations Act.....219
Urbanism
see Population statistics, urban
U. S. Housing Authority.....96, 344, 381, 382, 457
see also Housing, low-cost; Housing, for defense
U. S. Housing Corporation.....378
U. S. Maritime Commission.....479
Utah Power & Light Co.
financial and depreciation history of excess revenues..... 89
rate of return
on common stock equity..... 93
on total stock equity..... 92
on utility plant..... 90

V

Vacant land
see Flint, Michigan; Off-street parking; Subdivisions, rural; Zoning, rural, in Cook County, Illinois
Valuation, public utility
see Chicago Gas case; Going value; Index numbers; Rate-making; Wisconsin Telephone case
Valuation, real estate
see Deficiency judgments; Land transfer stamp tax

W

Wage and Hour Act....117
War
see Draft; Housing, for defense; Regulation, outlook for
Washington, state of
see Flood-plain regulation
Water carriers, federal regulation of....478
Water resources
see Public power districts
Water utilization
see Land-use legislation, rural
Wealth, distribution of
see Inheritance, effect of
Wholesale rates, electric
see Bonneville resale rates
Wisconsin
see County zoning; Depreciation accounting
Wisconsin Telephone case
merits of case.... 41
net income.... 45
procedural aspects.... 37
rate of return.... 44
rate-base.... 41
Wisconsin Telephone Co. v. Public Service Com. of Wisconsin.... 37
Working capital
see Railroad financing

Z

Zoning
see Flood-plain regulation; New York City
Zoning, rural
for Missouri
applicability, tests of....156
land-management practices, relation of....155
"positive" vs. "negative" conflict....154
principles and terms defined....151
for the Ozarks
development program....163
development vs. regulation....162
farm income and zoning....160
obstacles to zoning in the Ozarks....159
in Cook County, Ill.
acreage allowances per district....439
important provisions....440
merits of ordinance....440
purposes of ordinance....439
zoning districts....439
in Minnesota....105
see also County zoning
Zoning, urban
see City planning; New York City; Non-conforming use

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Democratic Telesis and County Agricultural Planning ..... *Bryce Ryan*
Crop-Yield Index Numbers ..... *E. J. Working*
The British Program for Farm Labor ..... *M. R. Benedict*
Contributions of Soil Science and Agronomy to Rural Land Classification ..... *Charles E. Kellogg*
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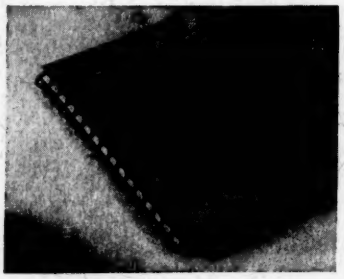

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